15 CENTS A COPY

THE OIL WEEKLY

OIL & GAS ENGINEERING

News Statistics

HUGHES tools

have played an important part in making "OIL" a world wide industry

"the big 4 FOR Performance

During its more than 20 years of service to the Industry—Hughes Tool Company has played a major part in broadening the scope of the Rotary Method of drilling.

Today, the economies, safety and speed of the method are in evidence throughout the oil fields of the world.

Operators, Contractors and Drillers have learned through experience, that every Hughes Tool Company product is supreme in performance of the work for which it was designed.

Hughes Tool Company

Service Plants: Los Angeles, Oklahoma City, Midland

Main Office and Plant HOUSTON, TEXAS

Export Offices: Woolworth Bldg. New York City

March 13, 1931

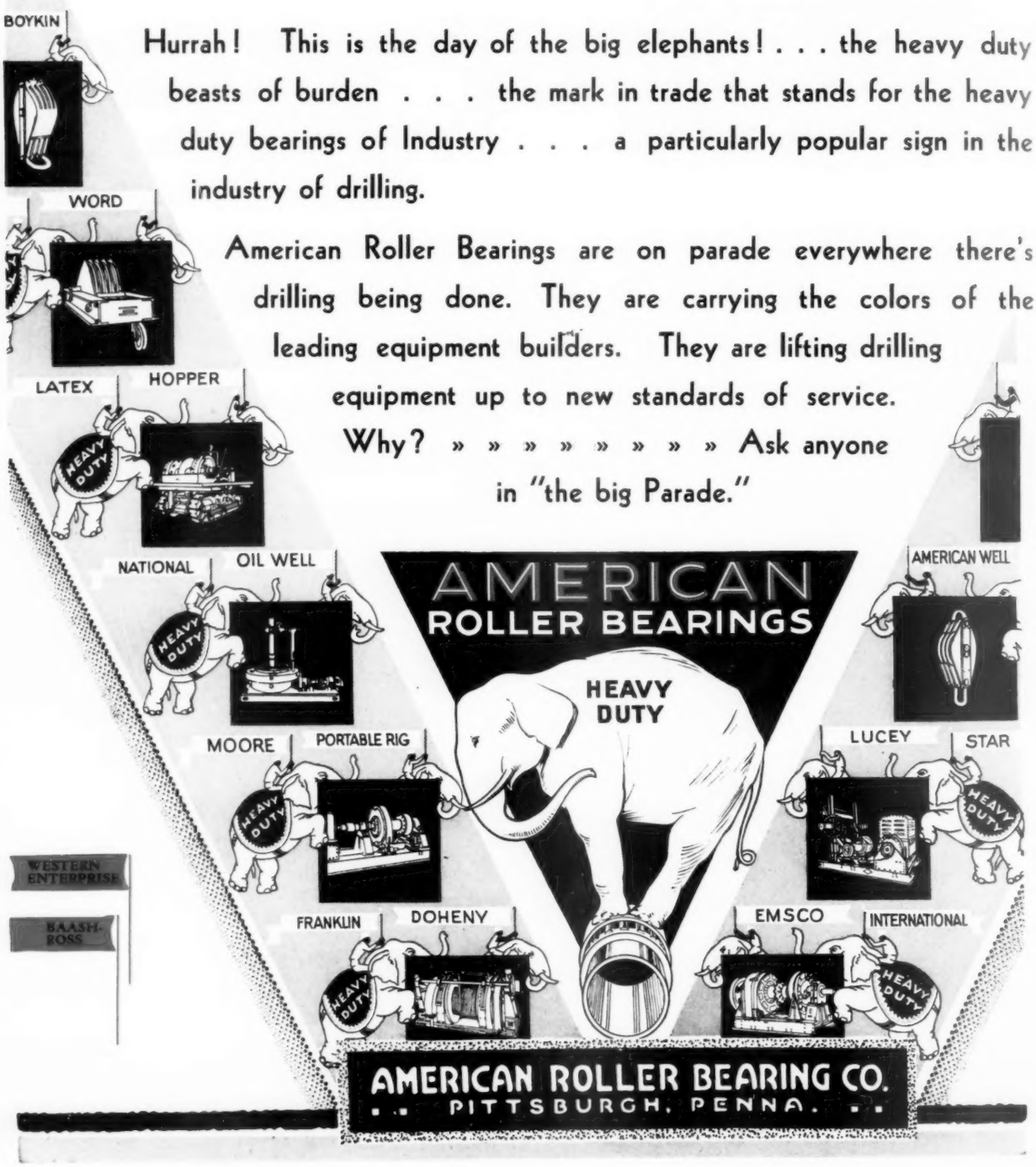
ADVERTISERS INDEX, PAGE 145

EDITORIAL INDEX, PAGE 37

THE BIG PARADE

Hurrah! This is the day of the big elephants! . . . the heavy duty beasts of burden . . . the mark in trade that stands for the heavy duty bearings of Industry . . . a particularly popular sign in the industry of drilling.

American Roller Bearings are on parade everywhere there's drilling being done. They are carrying the colors of the leading equipment builders. They are lifting drilling equipment up to new standards of service. Why? » » » » » » » » Ask anyone in "the big Parade."



AMERICAN ROLLER BEARING CO.
PITTSBURGH, PENNA.

The OIL WEEKLY. Issued weekly by the Gulf Publishing Co., 3301 Buffalo Drive, Houston, Texas. Subscription price $1.00 per year; 15 cents per copy. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1879.

ANNOUNCING—

A NEW GASO

Timken Tapered Roller Bearings—sealed off from crankcase

▼

Monel Metal Valves of light construction—with Bronze Seats

▼

No overlap of Piston Rods

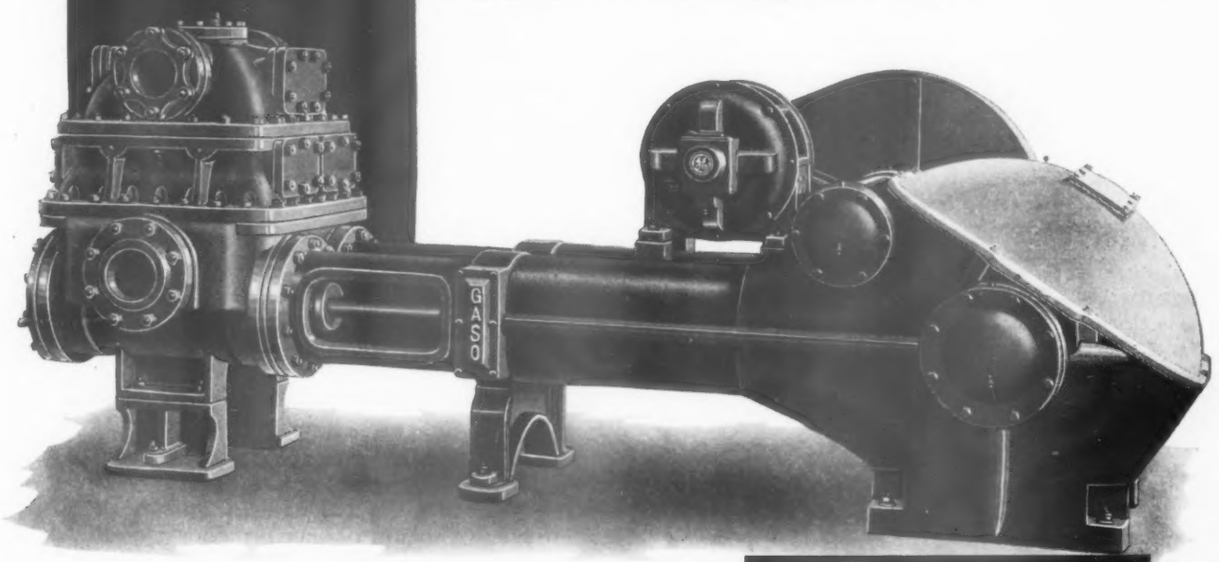


Fig. 1931 GASO Enclosed Type Timken Bearing Suction Pump With Interchangeable Liners from 6" to 10" and with 18" Stroke

Send us your requirements for full information on Gaso Pumps for any purpose.

GASO PUMP & BURNER MFG. CO.
TULSA, OKLA. EXPORT OFFICE: NEW YORK, N. Y.

Wide face, stub tooth semi-steel Gear and forged steel Pinion Gear, running in oil—silent and efficient

▼

Connecting Rod Crank End is equipped with steel removable shell bearing, babbit lined.

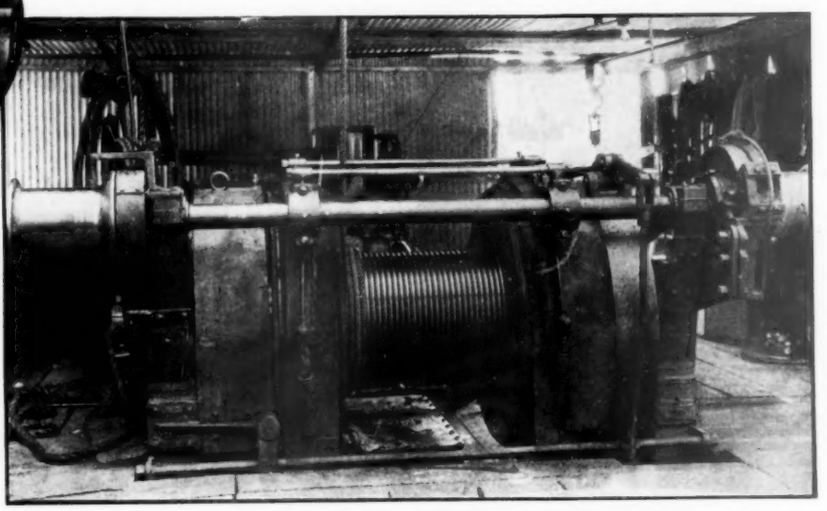
GASO PUMPS

for every oil industry need

2 bands of American Brakebloks = 8 bands of brake lining....

Ask this Crew!

ABOVE—*Crew at the Texas Oil Company Chamberlain No. 1, who set new brake performance record with American Brakebloks.*

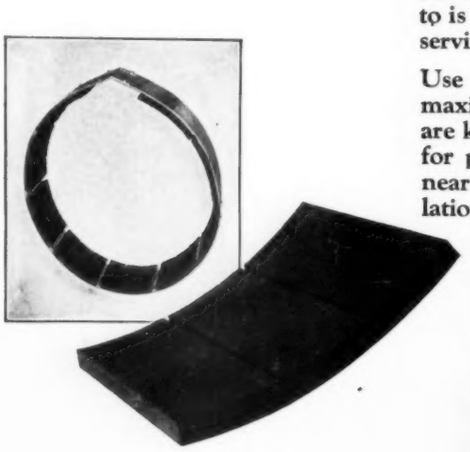


RIGHT—*A view of the new Doheny Stone Draw Works at Chamberlain No. 1. The first set of American Brakebloks, installed on grass roots, did not have to be replaced until 120 days later at a depth of 5111 feet. According to the crew, it would have required eight bands of ordinary lining to go this same distance under similar conditions.*

AMERICAN BRAKEBLOKS have established hundreds of performance records in the field of oil well braking—many even more remarkable than this one at Chamberlain No. 1. In fact, wherever used, they have always out-performed woven and molded linings—cutting costs by as much as 50 per cent.

Based on the formula for a famous railroad brake material—the result of 30 years' experience—American Brakebloks are *entirely* different. Heat does not affect them. Water does not affect them. Pressure does not affect them. The only thing they are subject to is wear. That's why they deliver so many more ton miles of service, and are dependable at every depth.

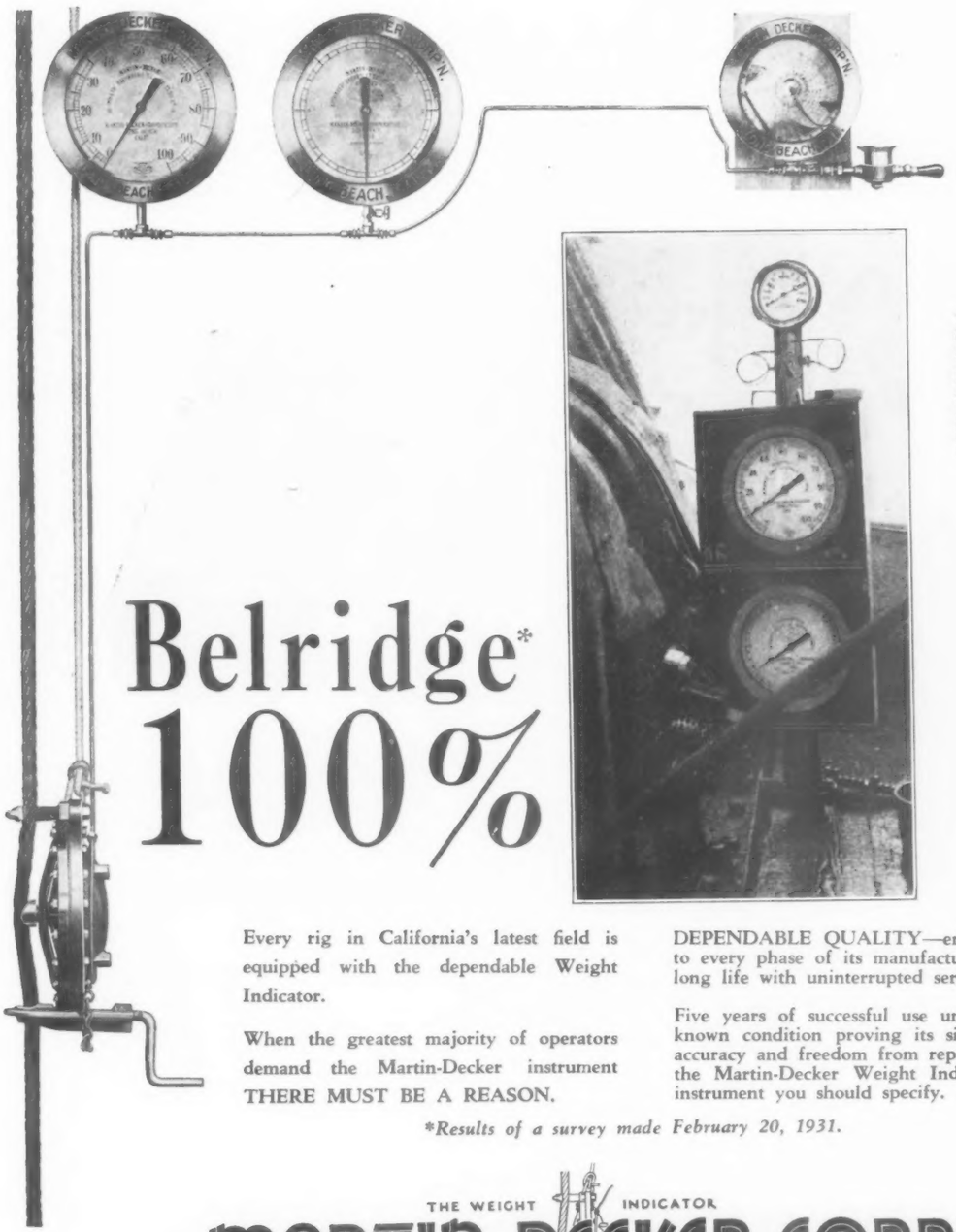
Use American Brakebloks to cut your braking costs—to make maximum footage every day. They will not smoke or fume. They are kind to brake flanges. They are best in every way—for trucks, for passenger cars, for oil well brakes. Write now for name of nearest supply house and for folder describing numerous installations and performance records.



AMERICAN BRAKE MATERIALS CORPORATION
Industrial and Automotive Division American Brake Shoe & Foundry Company
4660 MERRITT AVENUE - - DETROIT, MICHIGAN, U. S. A.
Sales Offices: 230 Park Ave., New York; 1414 McCormick Bldg., Chicago; 5309 E. Slauson Ave., Los Angeles; 74 New Montgomery St., San Francisco; 2620 Maury St., Houston, Texas. *Export Department,* 30 Water St., New York City

AMERICAN BRAKEBLOKS
TRADE MARK REG IN U.S. AND CAN. PAT. OFF'S.

MARTIN - DECKER AUTOMATIC RECORDING WEIGHT INDICATOR



The majority of these installations include the Vernier Gauge, Martin - Decker Mud Pump Gauge and Steel Box as shown in the accompanying photo taken in the Belridge field January 16, 1931.

Belridge* 100%

Every rig in California's latest field is equipped with the dependable Weight Indicator.

When the greatest majority of operators demand the Martin-Decker instrument THERE MUST BE A REASON.

DEPENDABLE QUALITY—entering into every phase of its manufacture insures long life with uninterrupted service.

Five years of successful use under every known condition proving its simplicity—accuracy and freedom from repairs makes the Martin-Decker Weight Indicator the instrument you should specify.

**Results of a survey made February 20, 1931.*

THE WEIGHT INDICATOR

MARTIN-DECKER CORP.

LONG BEACH CALIFORNIA

Mid-Continent Distributors
Reed Roller Bit Company
Houston, Texas

Foreign Distributors for Weight Indicator
Oil Well Supply Company
Pittsburgh, Pa.

WEIGHT RECORDING MEASUREMENT AND CONTROL

Put your "cut oil" problems up to the Tret-o-lite Representative and you can be SURE of expert diagnosis *and* thorough recovery at minimum cost

The knowledge of oil treating possessed by the Tretolite Company has been accumulating through more than 20 years of research and practical experience with "cut oil" and "B. S." problems. The efficiency of the Tret-O-litE Process has been proved in the thorough and economical recovery of millions of barrels of oil.

Representatives in every district—at your service

TRETOLITE COMPANY, St. Louis, Missouri

Tret-O-litE

Reg. U. S. Pat. Off.

The Home of Tret-O-litE at Webster Groves, St. Louis County, Missouri

"Trifles make Perfection, but Perfection no Trifle"

B.S.&B. Perfection Vapor Pressure TANKS

¶ Guarding your crude, the B. S. & B. PERFECTION Vapor Pressure Tank stands on duty. Your crude is protected against loss of both quantity and quality. Have you ever realized that the evaporation of crude in an ordinary 250 barrel tank amounts to as much as 5 barrels per day? When your production is turned into these tanks, it stays in until released to the pipe lines. *There is no evaporation loss!* Evaporation loss is due to the escape of the lighter fractions—and because they are retained in this tank, well head gravity is maintained.

¶ Each B. S. & B. PERFECTION Vapor Pressure Tank is equipped with the B. S. & B. Thief Hole Pressure Vacuum Valve, which operates automatically. Should the gas pressure exceed 16 ounces (which is beyond the maximum produced on ordinary quiet crude by the sun's rays) this valve will open, closing again when that excess has been relieved. In like manner, if there is too much vacuum when the crude is released to the pipe line, this valve will open at 2 ounces.

We also manufacture A.P.I. Tanks. B.S.&B. A.P.I. bolted steel tanks conform to A.P.I. dimensional standards, and to the exacting standards of B.S.&B. manufacture, and carry the official A.P.I. monogram.

May we talk to you with definite facts and figures, and prove the value of these tanks, and the B.S.&B. service? Let us, by man or plan, letter or Literature! Please address Dept. A-44.

"Service on the Dot"

Fifty Field Stations are maintained throughout Mid-Continent and Rocky Mountain Fields, to assure prompt service.

"Service on the Spot"

Black Sivalls & Bryson INC.

OBSAB 1931 BARTLESVILLE - OKLAHOMA

No. 11 Well of the Royalite Oil Company in Turner Valley, near Calgary, Alta., Canada.

Winter Operations on No. 18 Royalite Well

Royalite Operate 21

LEADING Oil Companies and Drilling Contractors everywhere recommend and have standardized on Ajax and Ideal-Ajax Steam Engines. They know from past results about the permanency of these engines.

Ajax and Ideal-Ajax Engines are built in various types and sizes, both single and twin cylinder, to meet all drilling conditions.

For real satisfaction use Ajax and Ideal-Ajax Engines.

Built By

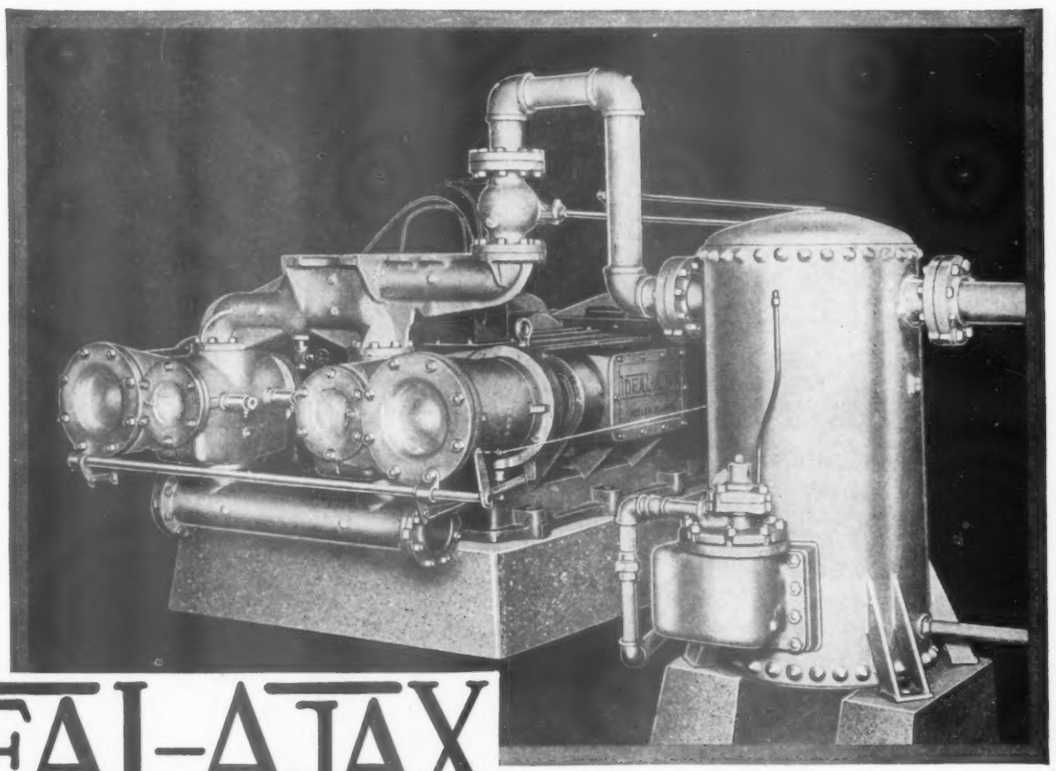
AJAX IRON WORKS
Corry, Pa.

Ask the National Supply Man for Details

Lowery No. 1 Well of the Royalite Oil Co.

Wildcat Well of the Herron Petroleum Ltd., Near Calgary.

AJAX Engines in Turner Valley, Canada



IDEAL-AJAX

ROLLER BEARING STEAM DRILLING ENGINES

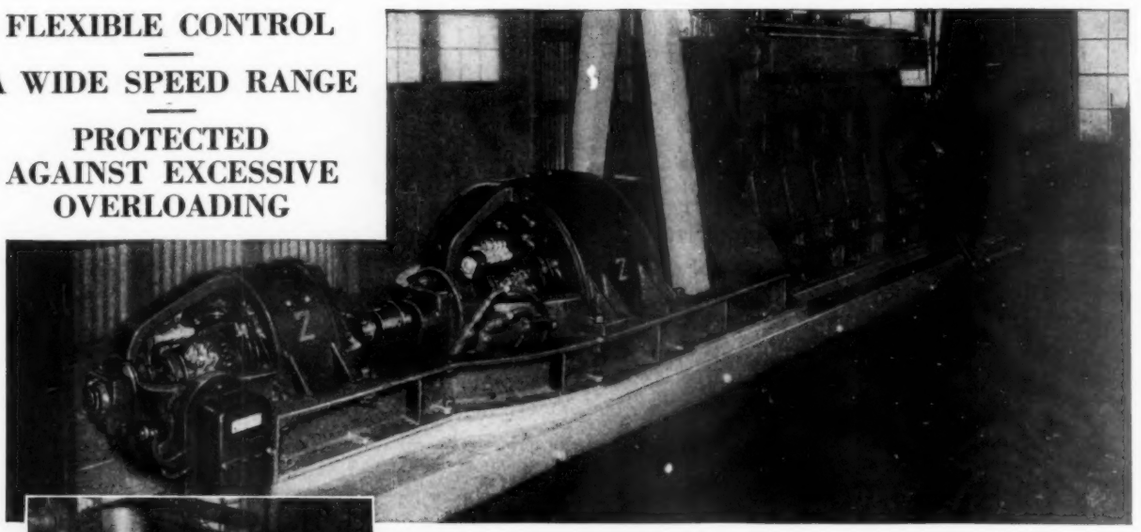
The illustration above shows the latest type IDEAL-AJAX Twin Cylinder Roller Bearing Engine (Piston Valve Type) with extra heavy Steam Separator.

General Electric Introduces a New D-c. Drive for Drilling

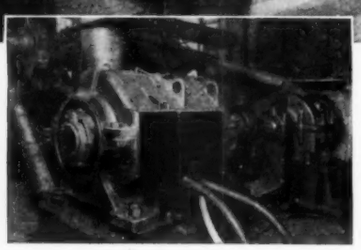
FLEXIBLE CONTROL

A WIDE SPEED RANGE

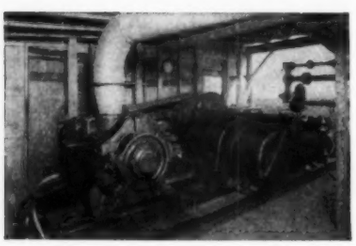
PROTECTED AGAINST EXCESSIVE OVERLOADING



One of the generating sets. This compact set includes a 125-kw., 250-volt, d-c. generator and exciter, driven by a 200-hp. Diesel engine



Draw-works drive



Mud-pump drive. The same type of G-E 150-horsepower, enclosed, d-c. motor, operated by Ward-Leonard control, is used for draw-works and mud-pump drives

General Electric also furnishes a-c. drilling equipment with heavy-duty magnetic control. This equipment has found universal favor because of its adaptability to various drilling conditions, and its automatically controlled, rapid acceleration. G. E. furnishes complete equipment to the oil industry, including motors, control, transformers, arresters, and switchgear.

IT HAS already made a hit. Users of this new G-E drive for rotary drilling have found that they've at last obtained the unbeatable flexibility of direct current together with the wide speed range heretofore thought possible only with steam drive. The engines cannot be stalled by an overload, nor can the electric equipment be overtaxed.

Where there are no power lines, this outfit, with Diesel- or gasoline-driven generating equipment, combines the advantages and economies of electric drive and internal-combustion engines: smoothness, low maintenance, ease of handling. And water consumption is reduced to a negligible amount. Where power can be taken from transmission lines, the same advantages may be realized by using a motor instead of an engine to drive the generator.

With these and other advantages available, field engineers are beginning to consider seriously the use of direct current for all rotary drilling.

O-1-31H

GENERAL ELECTRIC

SALES AND ENGINEERING SERVICE IN PRINCIPAL CITIES

The Key to Perfect Oil Well Control—

KEROTEST

Flow Line Valves and Fittings

—kerosene tested and certified to withstand 6,000 pounds hydrostatic pressure . . . available in all sizes, 2-inch to 6-inch inclusive, with either screwed or flanged ends.

For 100 per cent performance make your flow lines 100 per cent KEROTEST.

Also available in

1000 lb. Test
1500 lb. Test
2000 lb. Test
3000 lb. Test
6000 lb. Test

Kerotest Manufacturing Company
Pittsburgh, Penna.

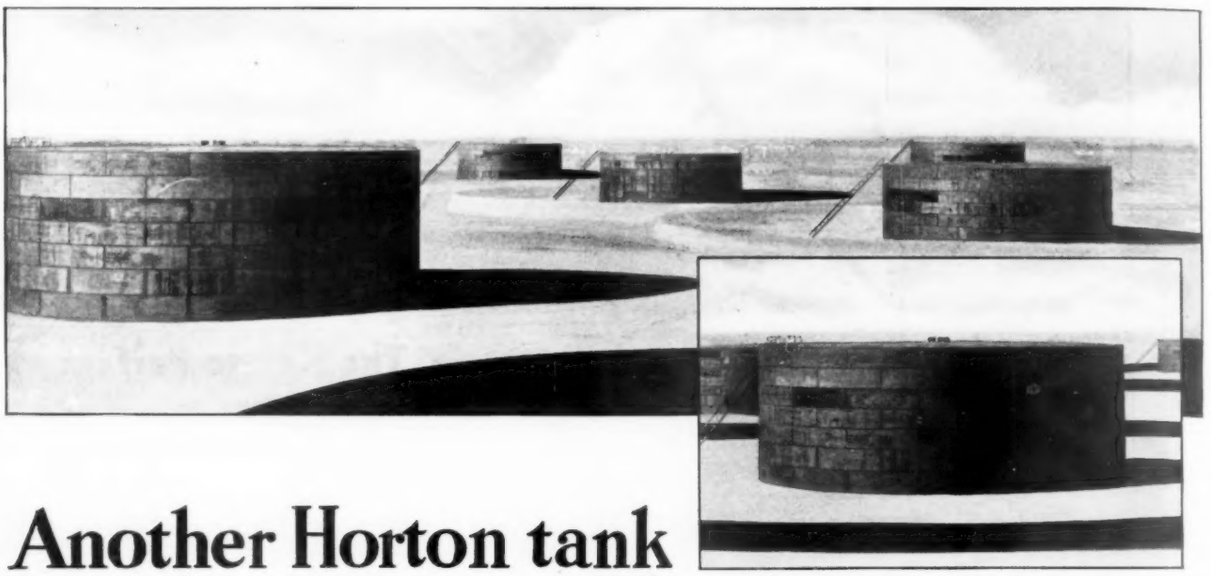
Los Angeles
March 16-22
1931

KEROTEST

VALVES FITTINGS

Carried in Stock and Sold By

Oil Well Supply Company, Branch Stores and Offices throughout the World
Norvell-Wilder Supply Company, Houston, Beaumont, Shreveport, Fort Worth



Another Horton tank farm — fully equipped with WIGGINS BREATHER ROOFS

Some of the 80,000-barrel Horton tanks at a tank farm in the Oklahoma City field. Below: A close-up of a tank showing the Wiggins Breather Roof. This roof flexes up and down to accommodate vapor volume fluctuations due to changes in temperature.

28 Breather-roof tanks stop standing storage losses in the Oklahoma City field . . . . . .

THE money-saving combination of Horton tanks and Wiggins Breather Roofs is again represented in a storage tank farm. Twenty-eight Horton tanks, with Breather Roofs for stopping evaporation losses, were recently erected in the Oklahoma City fields.

Horton oil storage tanks are favored by producers and pipe line companies in fields all over the world, for these reasons: their design and construction are the result of long experience in oil tank work . . . . they are backed by an old established organization with a record for satisfaction to customers . . . . fabrication facilities comprise plants at Chicago, Ill.; Greenville, Pa.; Birmingham, Ala.; and Bridgeburg, Ont. . . . our own erection crews are available anywhere. Savings in time and money result from buying tanks, roofs and other oil field platework from a single source.

Wiggins Roofs represent an investment that pays for itself in a few months through evaporation savings, and in addition reduce fire hazards. They also reduce corrosion, which is particularly advantageous when sour oil is stored. They may, of course, be installed on existing tanks as well as new ones.

We will be glad to quote on tanks, Wiggins Roofs and other platework; also furnish data from which you can figure evaporation savings possible with your tankage (either working or standing storage tanks). Please address our nearest office.

OTHER PRODUCTS

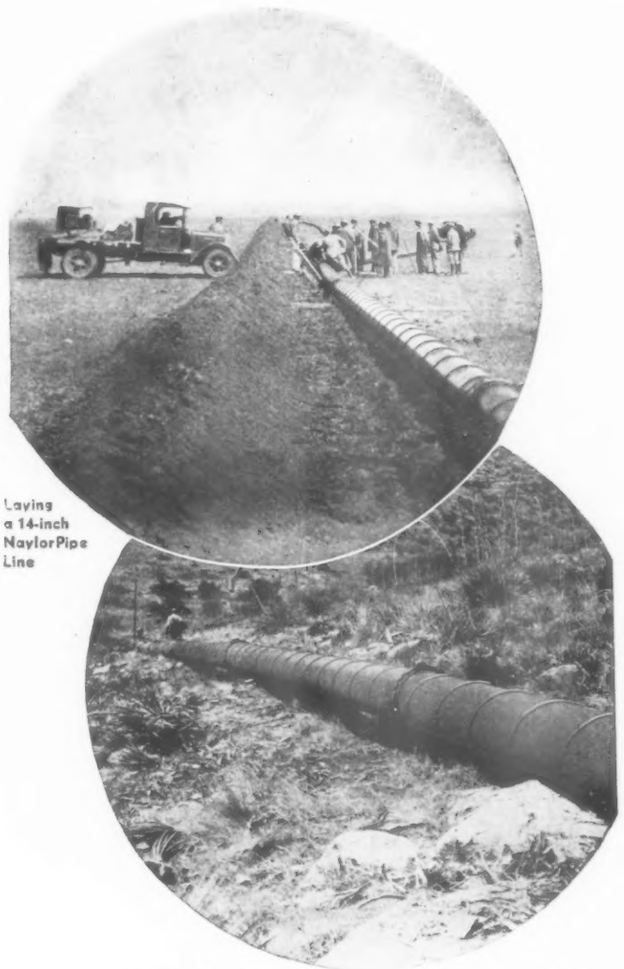
Oil Storage Tanks
Wiggins Roofs
Hortonspheres
Rundown Tanks
Cylindrical Tanks
Elevated Tanks
Standpipes
Pressure Tanks
Agitators
Absorbers
Bubble Towers
Condenser Boxes
Crude Stills
Refinery Equipment
Tank Cars
Smokestacks
Gas Holders

OW 3-13 Gray.

CHICAGO BRIDGE & IRON WORKS

Dallas	3338 Magnolia Bldg.	Cleveland	2241 Midland Bank Bldg.
Houston	1120 Electric Bldg.	New York	3144 Hudson Terminal Bldg.
Tulsa	2405 Exchange Bank Bldg.	Philadelphia	2613—"1616" Walnut St. Bldg.
Birmingham	1538 Fiftieth St., N.	Boston	1518 Consolidated Gas Bldg.
Chicago	2142 Old Colony Bldg.	San Francisco	1050 Rialto Bldg.
Detroit	1515 Lafayette Bldg.	Seattle	4322 Smith Tower
		Havana, Cuba	Apartado 2507

Two of a Number of Specific NAYLOR PIPE Savings in 1930



Laying a 14-inch NaylorPipe Line

See the Naylor Spiralweld Pipe exhibit in Booth No. 29 at The Second Annual Oil Equipment and Engineering Exposition, Los Angeles, March 16th to 22nd.

A SAVING OF $506.88 PER MILE. A well-known oil company made this saving on a 12" Naylor Pipe line. The laying costs of the whole line totalled only $100.32 per mile. A similar 12" line of standard weight, 18 to 22 foot random lengths, had cost this same company $607.20 per mile to lay. $506.88 more than Naylor Pipe had cost them!

A SAVING OF $500 TO $2000 PER MILE. The 16" Naylor Pipe shown in the photo at the left was trucked 31 miles; carted; strung and coupled at a total cost of only 11½ cents per foot. Compare this low cost per foot with your cost per foot for 16-inch standard weight pipe. The difference represented a saving of $500 to $2000 per mile for one oil company!

These savings were made possible because of two Naylor Pipe advantages—Light Weight and Unit Construction. Maximum Structural Strength and Long Life are other outstanding Naylor Pipe advantages that we would like you to know more about. Complete details gladly sent upon request. Write us!

NAYLOR PIPE COMPANY, Main Office & Plant, 1230 E. 92nd St., CHICAGO

PIPE CARRIED IN STOCK AT CHICAGO, HOUSTON AND LOS ANGELES

TONCAN COPPER
Naylor Pipe
Maximum Structural Strength Mo-lyb-den-um IRON With Minimum Weight

SALES OFFICES

NEW YORK, 3116 Chrysler Building
PHILADELPHIA, Witherspoon Building
TULSA, 507 Philtower Building
HOUSTON, 2301 Commerce Street
FT. WORTH: 402 Petroleum Building
LOS ANGELES: Champion & Barber, Inc., 576 Subway Terminal Building., Exclusive Distributors: California, Nevada and Arizona
MONTREAL, CANADA: Mechanical Equipment Company, 660 St. Catherine St., West
VANCOUVER, B. C.: Gordon & Belyea, Ltd., 101 Powell Street
MEXICO: C. H. Elstner, Apartado 284 Monterrey N. L.

This picture illustrates the exceptional lightness of Armco Spiral Welded pipe. Two men lift easily a long 40-foot section. Yet, strength is not sacrificed to light weight. This modern pipe is sturdy enough for most any kind of service.

Compel
PIPE COSTS TO RETREAT
....with this strong, light pipe

ARE you seeking a light, easily-handled pipe—a pipe that's as strong and straight as a finely-fashioned gun barrel?

It is here, for you, in Armco Spiral Welded Pipe. Savings begin with transportation and do not end until this sturdy pipe has returned real dividends in service-years. Hauling, handling, stringing, assembling . . . all are simplified and speeded up.

And a revelation awaits you when you see the interior of this precisely-made pipe. It is smooth and true. No ridges to impede flow. No channels to catch sediment and debris. This means *efficient conduction* from intake to outlet.

You can obtain Armco Spiral Welded Pipe in a wide range of lengths and sizes, prepared for any standard type of coupling, or for field welding. As for coating, you may have your choice among mill-coated pipe, asphalt-coated, and galvanized.

Every day more producers are approving Armco Spiral Welded Pipe for gas, oil, steam pipe, and other lines. You, too, may have the facts upon which these companies based their decisions. Just write to any of one offices listed below.

THE AMERICAN ROLLING MILL CO.
Executive Offices: **Middletown, Ohio**
Export: **The ARMCO International Corporation**
District Offices
Chicago Cincinnati Cleveland Detroit New York
Philadelphia Pittsburgh St. Louis San Francisco Dallas Kansas City

ARMCO

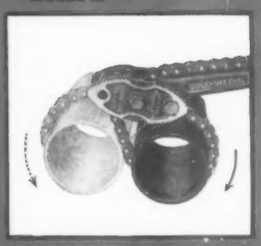
ARMCO
SPIRAL WELDED PIPE

LIGHT IN WEIGHT — FEWER FIELD JOINTS — EASY HANDLING — LONG SERVICE

In "Making Up" there's NOTHING TO DO BUT PUSH DOWN

"BREAKING OUT"
Simply pull tongs back to engage forward teeth and lift up.

NO HOLDING UP
To apply, lay tongs on pipe and hook chain around it.



REVERSIBLE ACTION
Always ready for either "making up" or "breaking out".

with "Vulcan Boll-Weevil"

"Vulcan Boll-Weevil", Williams' NEW oil-fields Tongs, provides the simplest and easiest way to handle flat pipe work and pipe line work.

You simply lay the Tongs on top of the pipe and hook the chain around it. There's no holding up heavy tongs against the pipe from below till the chain can be wrapped around and hooked in. All that waste time, effort and energy is saved.

"Vulcan Boll-Weevils" provide for "making up" and "breaking out", alternately, without unhooking the chain. Fitted with Reversible Jaws for double life—when the teeth wear, simply turn the jaws over. Proof-tested and CERTIFIED Chain. Four sizes, for ¾ to 12″ pipe.

Western Warehouse Sales Office
CHICAGO

Buy from Your Distributor
J. H. WILLIAMS & CO.
"The Wrench People"
75 Spring St., NEW YORK

Works
BUFFALO, N. Y.

WILLIAMS
SUPERIOR DROP-FORGED TOOLS

VULCAN BOLL-WEEVIL CHAIN PIPE TONGS

Williamsport wire lines proven by evidence of men in the field

High average service of WIRE LINES

is a thing that counts with drillers and in Seminole County drillers prefer Williamsport Wire Lines because it gives them the high average they expect.

And ample stocks, located conveniently under the management of factory men enables you to deal direct with the makers.

It's an important point for you.

Try a Williamsport Line next time and learn its true worth.

WILLIAMSPORT WIRE ROPE COMPANY

Main Office and Works: Williamsport, Pa.

General Sales Offices: 122 S. Michigan Ave., Chicago, Ill.

OIL COUNTRY SALES OFFICES:

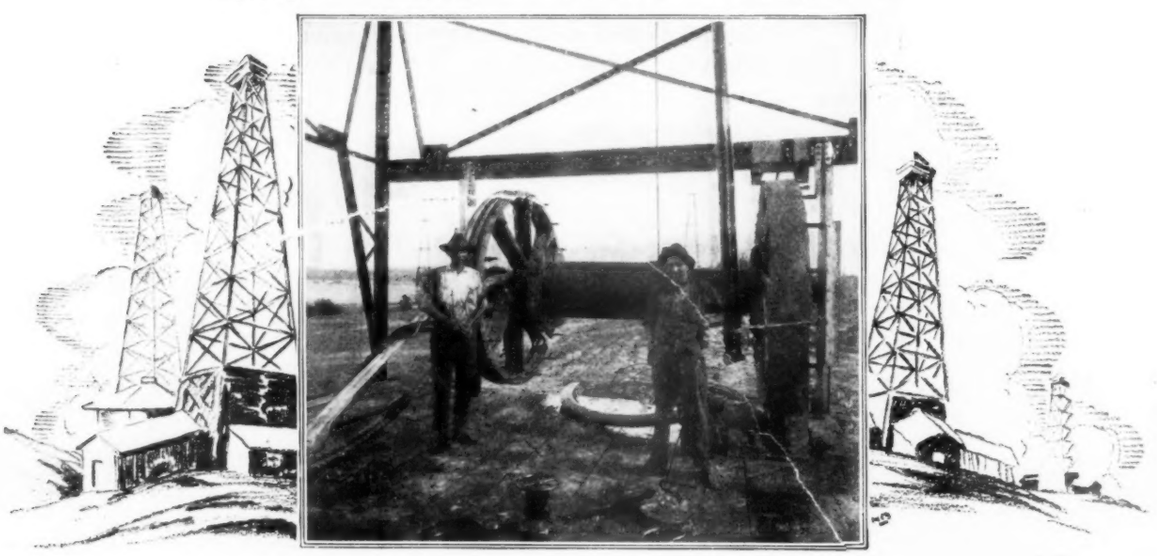
Williamsport Bldg., Fourth and Midland Valley Tracks, Tulsa, Oklahoma

1516 Chestnut St., Houston, Texas

Distributed by the Bridgeport Machine Company, Wichita, Kansas, and all of their Mid-Continent Branches.

DISTRIBUTING WAREHOUSES

Ardmore, Okla.	Electra, Texas	Oklahoma City, Okla.	Shreveport, La.
Arkansas City, Kan.	Houston, Texas	Odessa, Texas	San Antonio, Texas
Blackwell, Okla.	Hobbs, New Mexico	Pampa, Texas	Tulsa, Okla.
Borger, Texas	Lewistown, Mont.	Seminole, Okla.	Wichita Falls, Texas
Casper, Wyo.	Maud, Okla.	Shidler, Okla.	Wink, Texas



THE VICKERS OVERSHOT GAINS IN POPULARITY

Because it has delivered satisfactorily when time meant money . . . and because it is so simple to operate, with assurance it will do the work . . . The Vickers Releasing and Circulating Overshot truly deserves this popularity.

SAFE SURE SIMPLE

Satisfied Users Our Best Recommendation

The Vickers Releasing and Circulating Overshot

Patented

Only four major parts—fewer than other releasing overshots . . .

Releases properly, easily and without damage to the tool . . .

Bowl is made heavier to prevent bulldogging . . .

Lead Seal method of packing off, allows any desired pump pressure through stuck pipe while pulling — greatly increasing the chance to pull the fish.

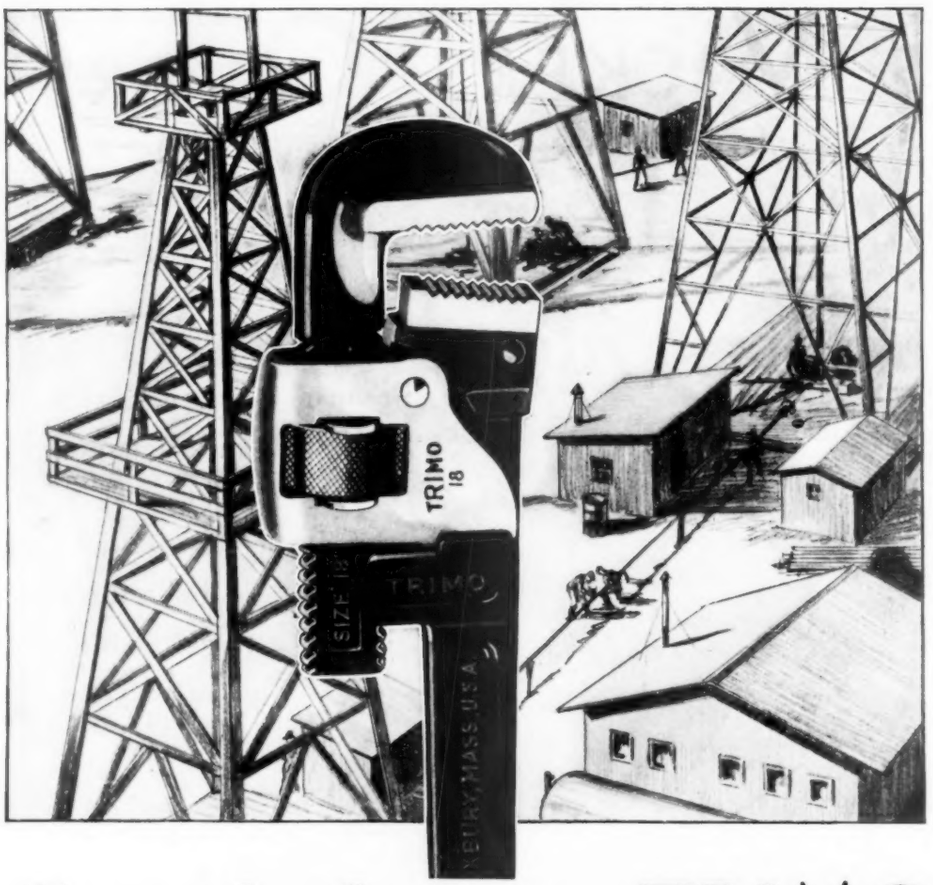
No "trigger work," no weak parts, simple —Never fails to function.

Sold Through Supply Stores

VICKERS MACHINE WORKS

OKLAHOMA CITY, OKLA.
1800 E. Avenue G
Telephone 2-8068

SMACKOVER, ARK.
P. O. Box X
Telephone 64



Specify Genuine TRIMO and get longer, safer working life

THE price you pay for a Genuine TRIMO is distributed over a long period of safe working time. When you buy a TRIMO you are buying working hours at the absolute rock bottom price. All steel and drop forged to resist breakage, with replaceable parts to offset wear at every point, TRIMO gives the longest, safest working life of any wrench made.

TRIMO

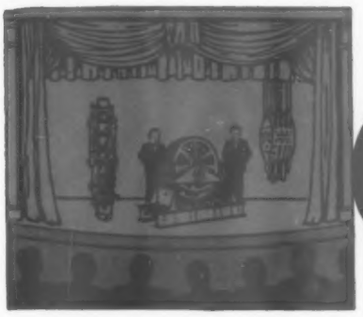
Handle drop forged - - - not cast

A Product of TRIMONT MFG. CO., Roxbury (Boston), Mass.

Makers of TRIMO wrenches, tongs, vises, cutters and wheels

TRIMO

ALL STEEL **TRIMO** PIPE WRENCH



See the latest first at the Oil Exposition

Looking forward to the demand for heavier equipment and more positive control methods, Regan has developed several new products to be demonstrated at the forthcoming Oil Exposition. These include a new Crown Block for 600,000 lbs., Type D; a 76-inch Traveling Block, Type 3B; a new Tubing Control Unit embodying the Regan Tubing Gas Controller with snubbing attachment; and the new Regan Hi-pressure Oil Saver. In addition, other important items in the enlarged and improved Regan line of equipment will be demonstrated.

If you cannot attend the Exposition, write for full information.

Regan presents
300 ton
CROWN BLOCK
• • •
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Tubing Control Unit
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Oil Field Equipment
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P. O. Box 444

Tubing Leak Indicator Doubles Efficiency of Crew

Follow the operations of the crew as pictured on the right: The day's jobs as scheduled for the crew are Jones No. 1 and Jones No. 2—both off production.

This pictorially shows what a crew can do while the Granger Tubing Leak Indicator AUTOMATICALLY finds the leak.

Quick Facts About Granger Tubing Leak Indicator

1. **Works by itself.**
2. **Stops exactly at leak.**
3. **Eliminates guesswork.**
4. **No Chopped rope nor color methods.**

This Coupon Will Bring Literature Describing the Tool in Detail. No Salesman will call unless requested.

GRANGER INDICATOR COMPANY,
137 N. Greenleaf St., Whittier, Calif.

Gentlemen: Without obligation on my part please send me full information concerning the Granger Tubing Leak Indicator.

Name .....

Position .....

Company .....

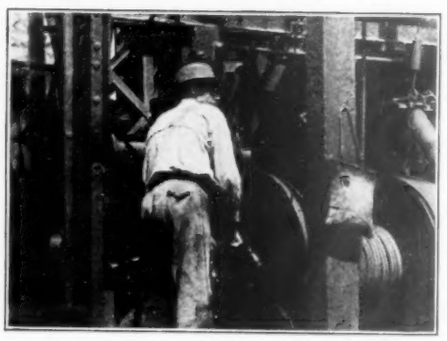
Address .....

GRANGER INDICATOR CO.

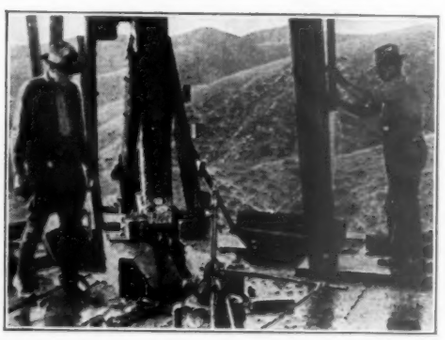
Main Office
137 N. Greenleaf, WHITTIER, CALIF.

Mid-Continent Branches
320 East 11th St., Tulsa, Oklahoma
A. M. Melton, Mgr.
120 Main St., Seminole, Oklahoma

8 A.M.: Rods have been pulled and valves examined in Jones No. 1. This is a tubing job. Picture shows indicator being prepared to run.
9 A.M.: The indicator is well on its way down to locate the leak.



3 P.M.: This crew has just finished running in its last stand of rods in Jones No. 2 on which they have been working since 9 A.M.
4 P.M.: Jones No. 2 on production.



Picture shows same crew, next morning, removing indicator at surface of Jones No. 1. This is a collar leak.
Under ordinary methods it would have taken several days to find leak.

A WINNING TEAM OF BUCKEYES

Like many other contractors, Henry L. Lemons, Inc., finds Buckeyes profitable pipe line equipment.

MODEL 48
Pipe Line Ditcher

On this 22″ Iowa gas line, Contractor Lemons reports that he is more than pleased with the performance of his big, husky pipe liner.

Here's exactly how he expresses it: "Model 48 is ditching 32 inches wide and averaging between 5 and 8 feet deep. In 8 hours, it delivers better than 1500 to 2000 lineal feet, cutting 14 inches of frost. A superior feature of this Buckeye is its constant production with minimum trouble, taking month in and month out. Compared with other methods or equipment, Model 48 proves to be the most satisfactory for pipe line work."

Preferred standards of the oil and gas field, there's a Buckeye suitable for every pipe line trenching requirement. Write for descriptive Catalog, "BUCKEYE—*The Pipe Liner*."

MODEL O ⅜-Yard
Revolving Shovel-Crane

Over thirty years of successful engineering have proved the soundness of Buckeye's design and construction. The same period of time has definitely established their reputation for delivering profitable performance continuously.

Into ⅜-yard full revolving Model O is built this dependability—earning power—which has always distinguished Buckeyes. It offers even more — Crane, Clamshell, Dragline, Shovel or Backfiller, all as required in a day's operation. This unit now provides a greater range of usefulness than ever before available in any equipment of its class—*at this price*.

We should be glad to send you complete specifications and the surprising price of this newest Buckeye.

THE BUCKEYE TRACTION DITCHER CO., Findlay, Ohio

for over thirty years

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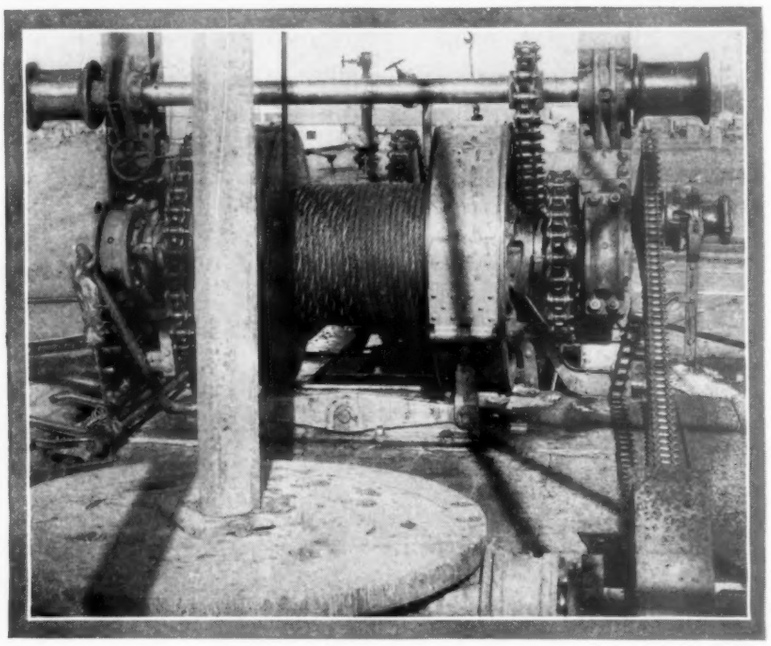
REX CHABELCO

DEEPWELL—THE GREATEST CHAIN THAT EVER HIT THE OIL FIELDS



CHABELCO THE CHAIN THAT GREW UP WITH ROTARY DRILLING . . . . . .

In 1930, one set of Rex Chain drilled complete holes at Wheeler No. 1, Jones No. 9 and Johnson No. 7 in the Oklahoma City Field all over 6,000 ft. and at the time of this report this chain, still in very good condition after drilling over 18,000 ft., was starting on its fourth hole. ● That's Rex Deepwell Chabelco—and the 1931 brand is improved. ● It's a laugh now, but Rex Detachable Chain once drilled oil wells. So did Rex Griplock Roller Chain—a superb malleable chain in its day. ● Then the original Rex Chabelco 1030 and 1240 were ready for the deeper drilling and faster, more powerful rotaries. ● A long program of invention—the notched out side-bars—the ground pins and bushings, the seamless rollers, and steadily improved alloy steel and heat treating—brought these steel chains along, as they progressed to Rex Deepwell Chabelco, 1030 D.W. 3 and 1240 D.W. 4. ● In other branches of the oil industry, a similarly consistent program of invention has led the advance of Chain Belt Company products for taking the job to the machine or taking the machine to the job.

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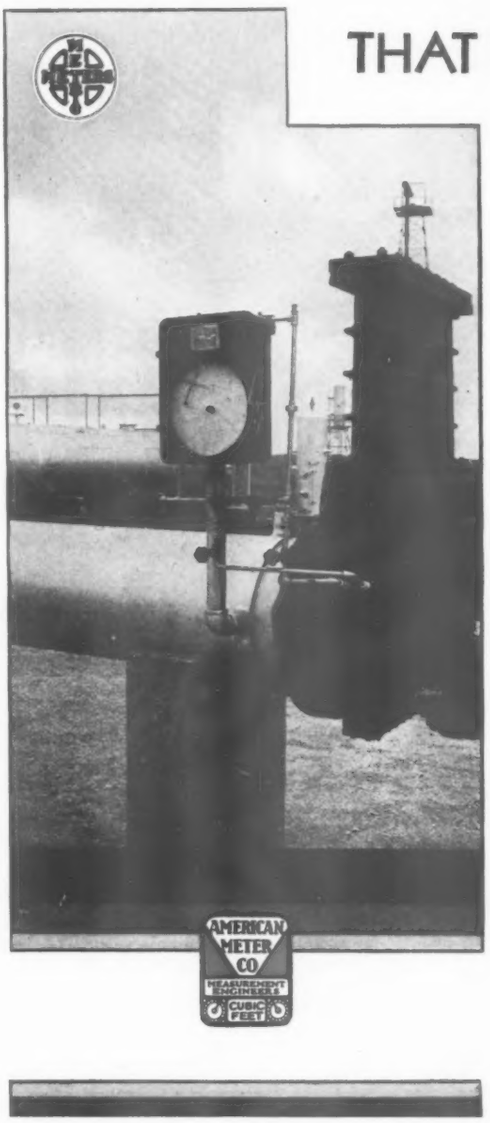
Meters



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Long-lived, reliable operation under the most exacting conditions of field service—that is the rigorous test which has given Westcott Orifice Meters recognized leadership. These meters have consistently demonstrated extreme ruggedness combined with lasting precision.

Sandstorms, rain, and snow; deposits in orifice meters due to the incomplete separation of gas and crude oil, rapidly heading wells, faulty regulators, chattering check valves—these and other factors comprise the rigors of service out in the fields.

To meet them effectively, Westcott Orifice Meters are skillfully designed for easy removal whenever dismantling, cleaning, and reassembling becomes necessary. By taking off the cover casting every working part is accessible without the need of changing adjustments.

To check and zero the meter is also convenient. Adjustments are made without disturbing any of the working parts. Both before and after zeroing, a Westcott Meter will be found accurate to the smallest visible reading.

Invented, designed, and developed by men with a lifetime of field experience, the Westcott Orifice Meter is built to maintain accuracy of measurement under the conditions that it must encounter in use.

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Ironcase, Ironed Steel Case and Orifice Meters
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The World's Largest Manufacturers of Gas Meters and Allied Apparatus
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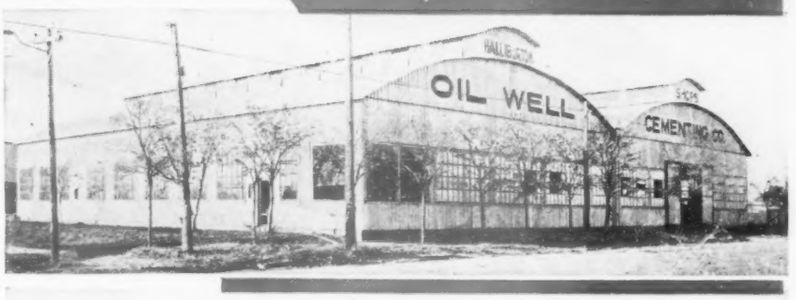
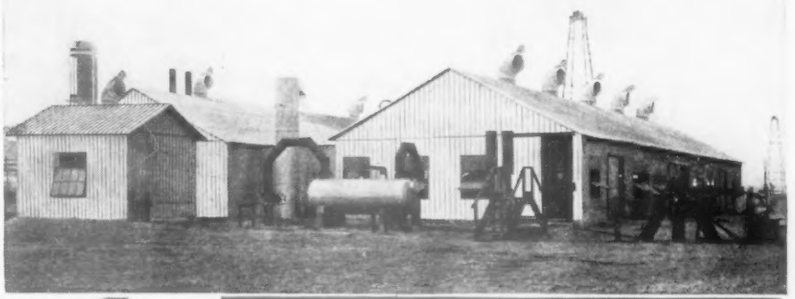
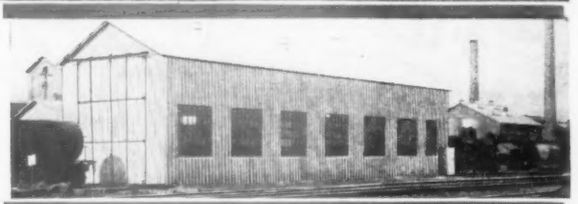


The Standard of Oil Field Structures





SINCE installing the Butler Steel Buildings shown here—

One owner has ordered additional standardized units with which to enlarge the original installation.

Another has taken the original installation down, shipped it to a new location and with additional standardized units re-erected it on a larger scale.

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Minneapolis, Minn.

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in.....ft. x.....ft. x.....ft. building for.....

Firm name.....

By.....

Address.....

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IN THE SMACKOVER FIELD

El Dorado, Ark.

Donovan Boiler Works, Inc.,
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Gentlemen:

During my visit at the International Petroleum Exposition, there was nothing, after viewing all the exhibits, which impressed me more favorably than the DONOVAN boiler in operation.

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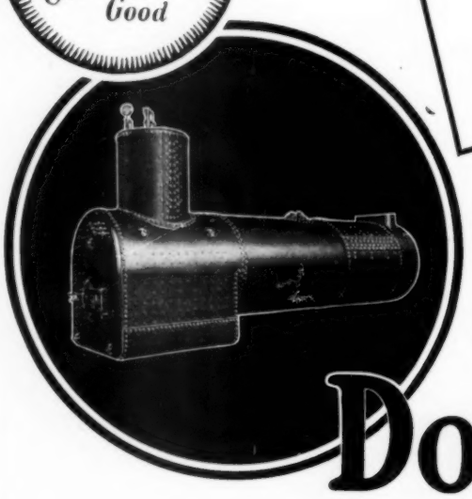
We have carried a working pressure of 180 pounds on the non-code, 66 H.P. DONOVAN BOILER and 200 pounds on the A.S.M.E. code, 70 H.P. DONOVAN BOILER and have always found them to be perfectly safe.

Yours very truly,
GARRETT-MODESITT DRILLING CO.,
(Signed) J. M. Garrett.

Donovan Boilers *are* Consistently Good



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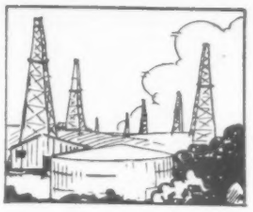

FOR PERFECT PERFORMANCE

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Animated forms kneeling and squatting in a worshipful huddle; one, for the moment, is master of the ritual. With a delighted grin, and a sweep of his arm, he gathers the white cubes. Then with a passionate exhortation to "be good to papa!" he gives his fist a preliminary shake followed by the mystic formula of breathing warmingly into his cupped hand, which is supposed to dispel the evil spirits of bad luck. Now he cocks his head jauntily, like a robbin listening for a worm, and raises his jazzily jerking hand alongside his ear. He listens with rapt attention to the clicking cubes which sing a seductive song of luck and sudden wealth. Intoxicated with joyful expectation, he begins to croon endearments and cajoleries, and with empassioned eloquence begs the bones to "cum sebbin baby! Be good tuh papa. C'mon sebbin! Heah it comes!" With swift underhand gesture, accompanied by one last supplicating grunt, and a snap of the fingers, he throws the dice spinningly into the air, they plop gently into the dust—a four and a three.

It's great fun, a real thrill to watch, but the wise know that results are purely luck. The ritualistic hocus-pocus indulged in by the crap shooter is a perfect performance. AS A PIECE OF ENTERTAINMENT.

You don't have to get down on your knees and plead for good luck when you use the American Releasing and Circulating Spear as it slips into the casing, drill pipe or tubing, grips and releases, grips and releases, at the will of the operator, until the fish is out of the hole.

Los Angeles
March 16-22
1931

AMERICAN
IRON & MACHINE WORKS CO.
OKLAHOMA CITY, U. S. A.

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GULF

Modern

Methods

Make

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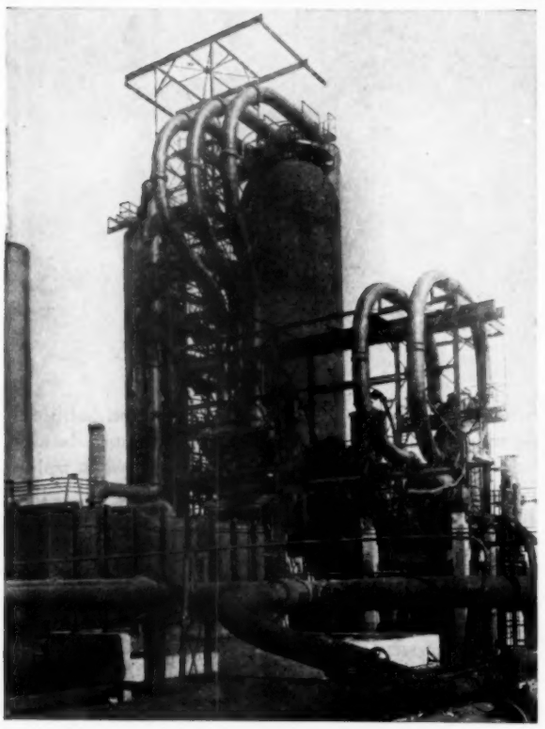

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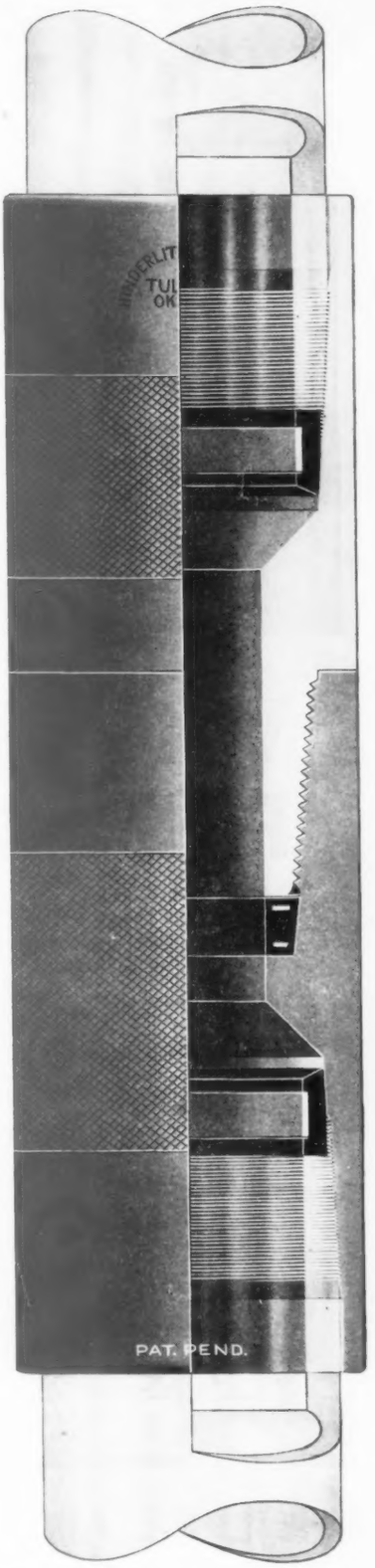
REPLACE YOUR "WASH-OUTS" WITH

HINDERLITER

FLUID-SEAL PACK-OFF JOINTS



The Hinderliter Fluid-Seal Pack-Off Rotary Tool Joint packs off rotary mud-laden fluid from entering internally the thread combination between drill pipe and rotary tool joints.

Packs off leaky center rotary tool joint threads damaged and cut in the process of wrenching or setting up.

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Good clean threads,
Night and day,
Compensate for the old
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This service has demonstrated its ability to lower costs, speed up the work, and enable the production of a permanently tight line with tough, ductile welds as strong as the pipe—fully 100 per cent. efficient.

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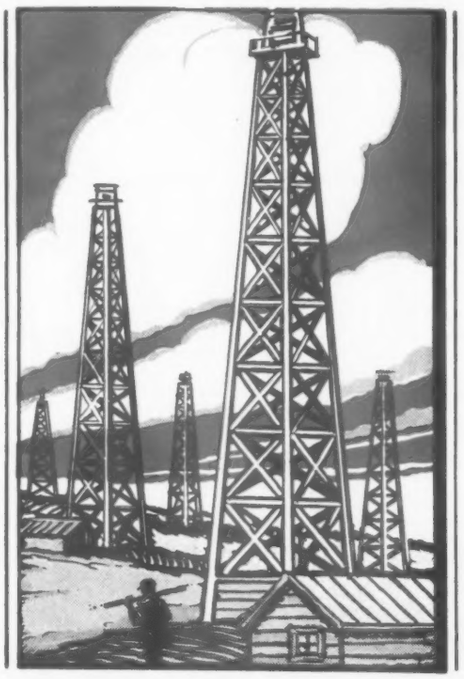

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WELDED *and* SEAMLESS

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NO MAN ON THE STAFF...

who hasn't held the brake at least 5 years

When a man steps on to *your derrick* floor, to run a special tool in *your well,* you feel a lot safer if you know something about the man, his experience, and his tool.

Not a single man on the J. S. Abercrombie Red Ball Cutting Service Crew has had less than five years actual drilling experience. Every one of these men has met, and overcome, virtually every kind of fishing problem that can arise. Consequently, they are prepared to recommend what should be done on difficult fishing jobs.

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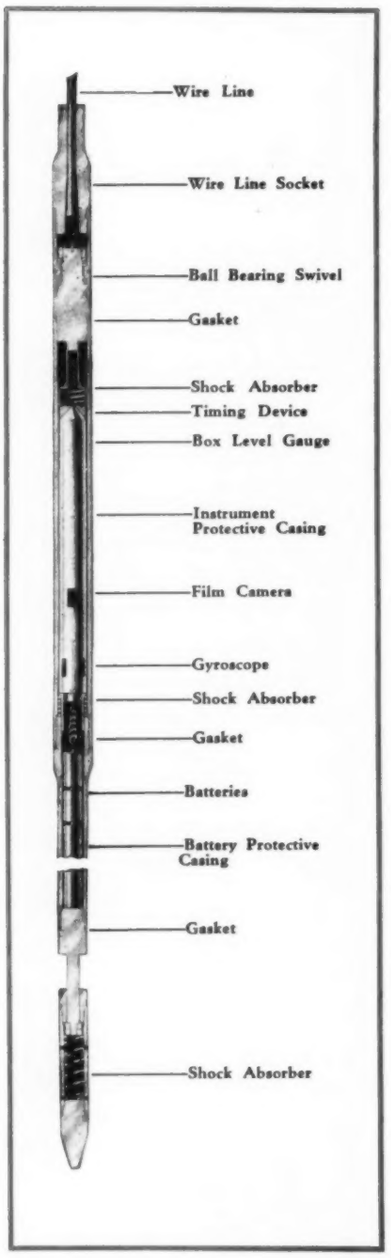

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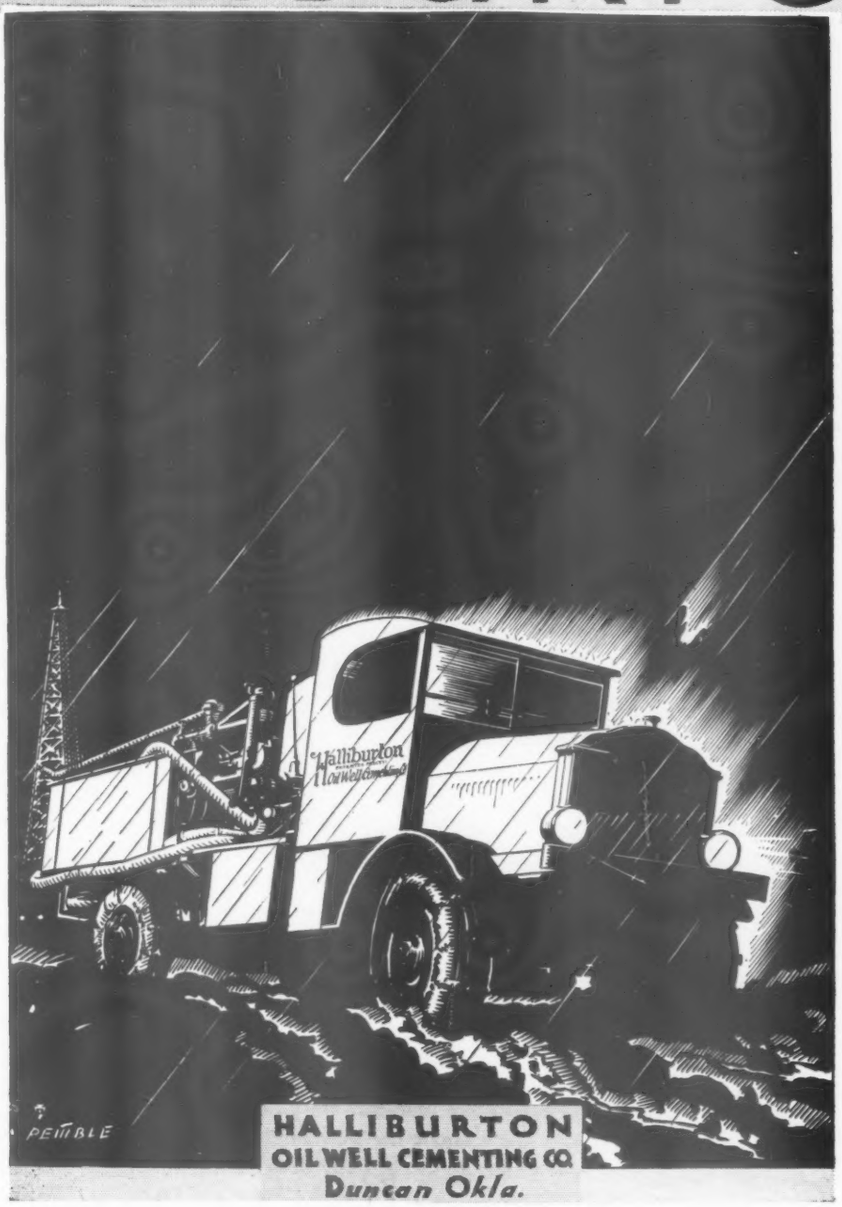

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Neither storms nor roads are allowed to interfere.

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You'll find a complete line of Baker Cement Floating, Guiding, and Cementing Equipment on display, and among them the comparatively new Baker Cement WHIRLER Shoe—the Floating and Cementing Shoe which has been received with enthusiasm by the entire industry. Also, you'll find a very interesting cutaway Float Shoe, showing just how the Shoe is constructed.

The New Baker Hydraulic Wall Scraper—

Here is a new tool that is doing unheard of things—a tool that will run through 9-inch O.D. casing and ream out as far as 19 inches, for instance! That is an unusual tool and that it is doing phenomenal things in the field is testified to by the instantaneous and widespread demand for it. There'll be a lot to do and see at the Exposition, but whatever you miss don't let this Wall Scraper be one of them. It's really important to you.

Baker Coring Equipment—

Baker Coring Equipment is complete, for both standard and rotary work. The Baker Cable Tool Core Barrel is used and accepted as a practical and economical tool, worthy of preference, all over the world. Now comes the Baker Rotary Core Barrel, after more than three years of testing, improving, and perfecting. It gives more footage, more recovery, better cores, and is in every way a superior tool. Don't miss the cutaway model.

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The OIL WEEKLY

Member Audit Bureau of Circulations

VOLUME 60, No. 13

MARCH 13, 1931

Edited Weekly at Houston, Texas

SPENCER W. ROBINSON, EDITOR

CONTENTS

Special Features

Soviet Construction Plans Indicate Change of Policy 39
By Roy E. Leigh

Map of Russia in Europe 40

Supply Situation Obscured by Potentials in January 42
By H. J. Struth

Answers to The Oil Weekly's Question "Why?" 44

California Exposition Offers Opportunity for Engineers to Study Latest Methods and Equipment 46

Late Equipment Arranged for Exposition Display 49

Method of Determining Effective Porosity of a Reservoir Rock 70
By Kenneth B. Barnes

Wall Scaper Proves Aid in Deepening Operations at Refugio 83

Anderson Surveying System Result of Long Research 88
By Brad Mills

Summary of Field Operations, February 119

Regular Departments

Advertisers' Index 145
Markets-Production-Crude Prices 91
United States Production Estimates 94
Crude Oil Price Quotations 97
Personal Mention 100
Completions for Past Week in All U. S. Fields 124
Permits for New Wells 126
Wildcat Drilling Reports from All Important Areas 127
News from California Fields 103
Oklahoma-Kansas Field Notes 105
Gulf Coast Field Developments 114
North and West Texas Field Notes 108
East Central Texas Fields 109
South Texas Field Developments 112
New Mexico and Rocky Mountain Area 107
Louisiana-Arkansas Development Notes 117
New Equipment, Catalogs, Bulletins, Books 137
Squeaks from the Bull Wheel 142

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THE OIL WEEKLY

VOLUME 60, NO. 13 MARCH 13, 1931

Soviet Construction Plans Indicate Change *of* Policy

By ROY E. LEIGH
Associate Editor

A STUDY of the Soviet construction program, which is of such magnitude as, for example, might be required if the entire oil industry of the Mid-Continent area were to be re-built or duplicated in a short five-year period, reveals indications and evidence of an important change in Soviet policy. The writer is convinced that, so far, the greater percentage of Russian oil has been sent to export. The local populace is denied the use of petroleum. However, large pipe line and refining projects now being planned will not be used or needed unless one or another of the features of this present policy is to be changed. Pipe line and refining facilities which will have their outlets at Moscow, Artemovsk, and other interior railway points can be used only in event the ban on domestic consumption is to be raised or if petroleum products are to be shipped by rail to European and Asiatic markets.

Since Russia has now become the second greatest oil producing country in the world, and since Soviet authorities have announced further increases in production which are expected to be achieved concurrently with the construction of large transportation and refining facilities, it becomes interesting to speculate regarding the future policy of the leaders of the socialized oil industry.

S. M. Ganshin, formerly a vice president of the Azneft Oil Trust but now referred to as if speaking for Soyusneft or for the Soviet oil industry as a whole, is quoted in a recent Associated Press dispatch from Moscow as having stated that Russian production totaled 18,651,000 metric tons (or approximately 134,827,000 barrels) during the 12 months ending December 6, 1930, and as having predicted that production would show a further increases of 45 per cent or a total of about 195,000,000 barrels during 1931. These figures are somewhat in excess of those published in Statistical Edition of THE OIL WEEKLY, January 30, which were supplied by Soviet agencies in the United States; but it is possible that the discrepancy may be explained by differences between the fiscal and calendar years.

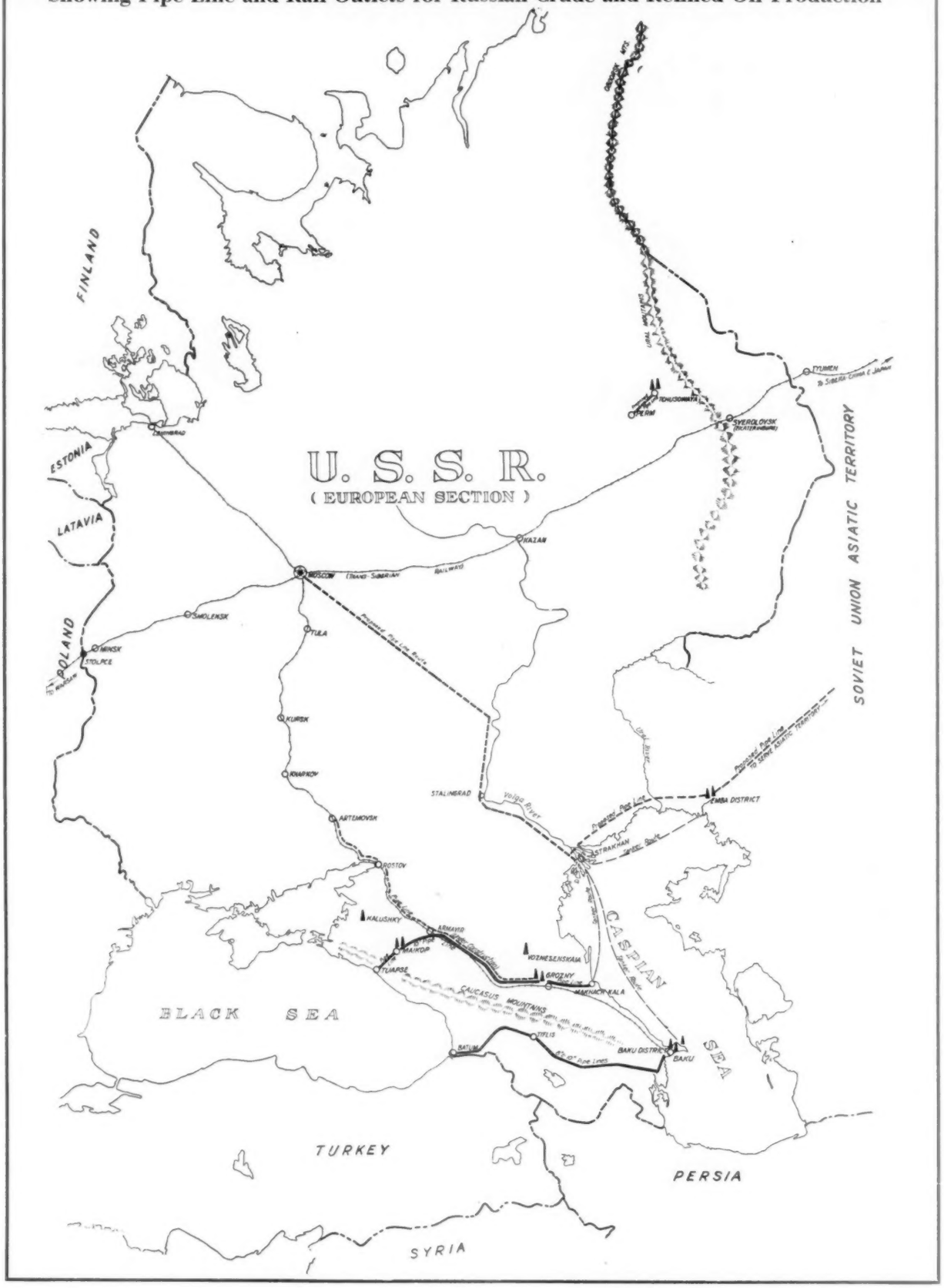
Of greater interest, however, is Mr. Ganshin's prediction that Soviet oil production is again to be increased by 90 per cent, or nearly doubled, during the remaining half of the five-year period. If this goal is achieved, Russian production will exceed 700,000 barrels per day during 1933, which means that outlets will have to be found for an increase of more than 121,000,000 barrels of oil per annum. That these figures are not impossible of achievement is indicated by the marvelous fertility of Russian oil fields and by the fact that the Soviet oil industry has heretofore attained every goal set for it since the commencement of the five-year plan of industrial expansion.

Are these increasing floods of oil to be dumped in foreign markets or consumed in domestic operations?

Heretofore, about 97 per cent of the energy of the socialized oil industry has been directed toward export trade. Domestic demands, apart from the fuel requirements of the railways and state industries, have been ignored. Individual citizens are denied the use of automobiles and are unable to purchase gasoline or other petroleum products. As a matter of fact, it is only those oil fields whose output can be sold in foreign countries that have been developed to any extent. Interior fields located remote from tidewater whose output is allocated to domestic requirements remain dormant and virtually undeveloped.

Operations in all of those fields for which ocean outlets are provided have been pushed to the limit of the Soviets' resources, and it is from these flush fields that Russia's increases have come. Russia's greatest oil centers are at Baku and Grozny, on and near the Caspian Sea, and at Maikop, a short distance inland from the northeastern shore of the Black Sea. Oil fields in these three districts are served by two trunk line systems paralleling the Caucasus Mountains and stretching from the Caspian to the Black Sea, whence tankers have outlet via the Mediter-

MAP OF RUSSIA IN EUROPE
Showing Pipe Line and Rail Outlets for Russian Crude and Refined Oil Production



ranean to European markets and through the Suez Canal to Asiatic ports.

Build Export Facilities

Construction projects new under consideration contemplate the substantial increase of all these export facilties,—and more significantly,—include several pipe line projects and refining centers which will serve the interior and Asiatic regions. These include a 2000-mile pipe line along the Volga from the oil producing regions to Moscow and other industrial centers, large refining bases at Moscow and other interior railway points, and 750 miles of line to convey refined products from Grozny to important industrial and railway centers in the eastern Ukraine.

These new projects all have their termini on important trunk railway lines connecting with the Trans-Siberian Railway. Does this mean that the ban on the domestic consumption of oil may be lifted and that petroleum products may be supplied to the Russian populace, say, after the termination of the five-year period? Or does it mean that refined products will be shipped over the Trans-Siberian route to Chinese and other eastern markets? Do the Soviets anticipate the loss of distribution through American companies interested in the opening up of competing oil fields in Iraq, or do they intend to cut loose and enter the Asiatic markets on their own behalf?

Heretofore, practically all of Russia's oil exports have been shipped by tankers across the Black and Mediterranean seas, through the Straight of Gibraltar and the Suez Canal; but completion of internal pipe line projects now being planned will make it possible to move oil by rail westward to Europe and eastward to China and Japan. This is just such a move as the Soviets, having no merchant marine, might be expected to make if they were planning to enter the continental European and Asiatic markets on their own behalf. Heretofore, the activities of Russian Oil Products, Ltd., and the Soviet Naphtha Syndicate have been limited to the United Kingdom, Mediterranean, and western European markets.

Distribution of Russian oils in the Asiatic and African markets has been handled by Standard Oil Company of New York and Vacuum Oil Company. If/when the Standard-Vacuum merger is approved by the Supreme Court, and if/when the Iraq pipe line is built, these companies—who share in the Iraq oil consortium—will no longer be dependent upon the Soviets for the supply of oil to their European, African, and Asiatic markets. Do the Soviets expect these American companies then to cut loose from their Russian affiliations; or do they intend to divorce themselves from their capitalist allies as a feature of their plan to conquer world trade?

Hold World at Mercy

Soviet authorities, recalling how they were able to force Standard Oil Company of New Jersey, the Royal Dutch-Shell, and Anglo-Persian Oil Company to enter a truce with Russian Oil Products, Ltd., in the British markets, make no secret of their belief that they hold oil producers and refiners of other countries at their mercy; and one must confess that, within certain limits and assuming the success of the five-year plan, they actually do. Their insurmountable advantage lies in their control of disciplined and virtually unpaid slave labor. So long as capitalist companies must pay their employees in gold or sound money at wage rates which permit the maintenance of European and American standards of living, the Soviets who pay their workmen in paper money and allow them only the barest essentials necessary to sustain life will be able to sell petroleum products at cut-rate prices.

In the official statement above referred to, Mr. Ganshin admitted that heretofore the increase of Soviet oil sent to export regularly exceeded in proportion the increase of internal consumption but pointed out that the increase in internal consumption was allowed to keep pace with the increase in exports during 1930, both having advanced by about 25 per cent. This carefully worded statement refers to the rate of increase and not to the volume of oil consumed internally as compared to the enormous quantities of oil which have been sold abroad.

The writer of this article has seen statistics purporting to show that a large percentage of Russian production is consumed within the country; but, after having traveled extensively in the Soviet Union and having noted the scarcity of automotive equipment, the almost complete lack of roads and highways, and the degraded living conditions of the people, he is compelled to reject them. Gasoline is not available to private individuals.

Russian production figures have been called into question repeatedly. Sir Henri Deterding, for example, said to the writer that "If the truth were told, I would not be surprised to learn that Russian production is only about 60 per cent of that currently reported." If there is any disparity in Soviet figures, it probably occurs in those alleged to represent domestic consumption.

But 60 per cent of 135 million barrels represents a large volume of oil.

Mr. Ganshin said recently that Russian exports will continue to increase in volume but will decrease in percentage with respect to total production. He referred to the scheduled increases in production already mentioned, to a large increase in drilling, to extensive refining facilities now being built at Batoum, Tuapse, Saratov, Armavir, Khabarovsk, and Kohanda, and said that "we not only are increasing storage and tank vessels but propose to build new pipe lines." He stated that construction has already been commenced on a pipe line connecting the Grozny field with the Ukraine, as described in THE OIL WEEKLY of January 30, 1931; and said that other lines will follow.

It may happen that the Soviet ban on domestic consumption of petroleum will be lifted or modified, but there is little possibility that exports will decrease.

The five-year plan contemplates that Russia will become self-supporting in machinery and all other types of manufactured goods. American manufacturers and supply men will be interested in Mr. Ganshin's statement that "We are taking measures to speed up and raise the efficiency of drilling machines. This year we will receive a large part of the necessary equipment from our own industries and be less dependent upon foreign manufacturers."

Soviet industries are already producing tubular goods, engines, motors, line pumps, sand pumps, rotary equipment, pumping equipment, and drilling tools in wide variety from American designs. Refining plants built from Russian designs and from Russian materials have not proved completely satisfactory, with the result that present construction of this type of equipment has been entrusted to American engineering firms.

Russian oil production costs now include only such sums as are spent abroad for machinery and foreign engineering talent. If/when the Soviet Union becomes self supporting in the way of machinery, Russian oil can be sold abroad at unbelievably low figures. Labor costs them nothing.

This expansion program is of interest to every producer, refiner, and distributor in the world, as it could happen that this flood of oil which may be dumped into glutted markets by a socialized industry unconcerned with production and operating costs would thwart all restrictive and regulatory measures now being attempted in the United States, South America, and other oil producing countries.

Supply Situation Obscured by Potentials In January

By H. J. STRUTH
Staff Economist

TO cite statistical improvement in the face of adverse market conditions may be somewhat contradictory, but the fact remains that a better state of balance existed between supply and demand in January than has been apparent for a number of years. Crude production was further reduced in January; refinery runs to stills were more effectively controlled; yet, the crude and refined oil price structure exhibited severe weakness that culminated in a further cut in the crude market last week. The answer to this unsatisfactory turn of affairs, despite the fact that there has been marked improvement in the above-ground supply situation, can be found in the constantly growing potential supply of crude. Fear has perhaps played a more important part in the economics of the petroleum industry during recent months than many will admit, but fear, nevertheless, seems to be the dominating factor in the industry's crumbling market structure.

Fear of the underground supply of crude, and the expression of that fear in the posting of constantly lower crude prices, seems to offer an admission that proration is failing to accomplish the purpose intended for it. Originally, proration was believed to have furnished the solution for overproduction and a most effective means of balancing above-ground supply with demand. In fact, it was the realization that a large potential supply of oil would be brought to the surface unless production was restricted. In view of the fact that the industry has been successful in stemming the flow of oil, having reduced actual production last year by more than 800,000 barrels daily, it is obvious that proration has actually defeated the purpose for which it was intended.

If the industry intends to gauge inventories by including the immeasurable quantities of oil underground, then it can be said that proration has done nothing more than to save the cost of building additional storage facilities. Money so saved has, however, been thrown into a common pot, in the form of shrinking values, as a toll to pay for the cost of storing oil in its natural reservoirs. In this connection, perhaps if the industry could actually gauge the quantities of oil in storage underground the market price of above-ground oil would now be less than a dime a barrel. The point emphasized here is that the actual benefits of proration have been badly obscured by the threat of unproduced supplies and the purpose of proration has accordingly been defeated.

The accompanying chart, compared with those of preceding months, shows material improvement in the factors of actual supply. Crude production, refinery runs, stocks and imports are materially lower than in January of last year. In most instances, the barometer makes a favorable showing in comparison with last year. Despite the improved statistical position, market values were at a low point in January, while subsequent developments brought about further demoralization of the industry's price structure. Stocks of all oils on January 31 were more than 31,000,000 barrels lower than on the same date of last year, while crude stocks were 26,000,000 barrels less and gasoline stocks were 6,800,000 barrels lower. Domestic gasoline consumption was about four per cent above January of last year, representing a gain of somewhat more than a million barrels.

It will be noted that there was a further decline in field activity during January and a marked drop in initial oil production from new wells, compared with December. Initial production compared with last year, however, was still 112,000 barrels ahead, although the number of wells completed was less than half the number completed last year. This shows the effect of bringing in large capacity wells in the Oklahoma City field.

Following is a summary of supply and demand of all oils for the month of January, as reported by the United States Bureau of Mines:

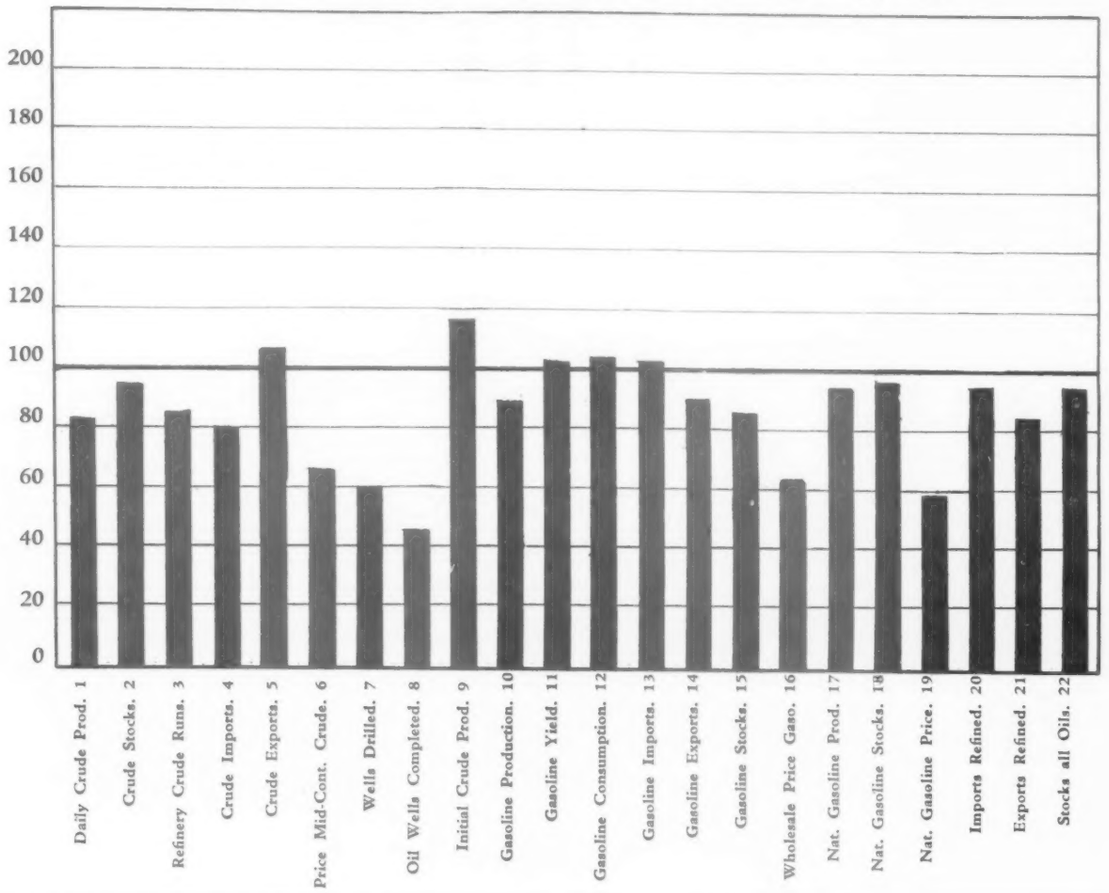
Supply and Demand of All Oils

(Including wax, coke, and asphalt in thousands of barrels of 42 U. S. gallons)

	Jan., 1931	Dec., 1930	Jan., 1930
NEW SUPPLY:			
Domestic production:			
Crude petroleum	65,991	66,985	79,721
Daily average	2,129	2,161	2,572
Natural gasoline	4,140	4,198	4,410
Benzol	184	183	240
Total production	70,315	71,366	84,371
Daily average	2,268	2,302	2,722
Imports:			
Crude petroleum	4,353	4,727	5,450
Refined products	3,601	3,310	3,806
Total new supply, all oils	78,269	79,403	93,627
Daily average	2,525	2,561	3,020
Increase in stocks, all oils	[1]3,847	[2]5,956	4,667
DEMAND:			
Total demand	82,143	85,359	88,960
Daily average	2,650	2,754	2,870
Exports:			
Crude petroleum	1,919	1,339	1,808
Refined products	10,091	9,729	12,037
Domestic demand	70,133	74,291	75,115
Daily average	2,262	2,396	2,423
Excess of daily average domestic production over domestic demand	6	[2]94	299
STOCKS (end of month):			
Crude petroleum:			
East of California	366,428	368,051	386,176
California[3]	142,757	144,746	148,991
Total Crude	509,185	512,797	535,167
Natural gasoline at plants	606	578	611
Refined products	152,405	152,495	158,055
		[4]152,694	
GRAND TOTAL STOCKS, ALL OILS	662,196	665,870	693,833
		[4]666,070	
Days' supply	250	242	242
Bunker oil (included above in domestic demand)	3,544	3,868	4,223

[1]Decrease. [2]Deficiency. [3]Includes residual fuel oil. [4]On new basis to compare with 1931; includes gasoline in pipe lines (see p. 10).

Salient Oil Industry Factors for January, 1931, Expressed in Per Cent of January, 1930. Heavy Line (100) Represents January, 1930



Oil Industry Barometer—January, 1931

Index of Salient Factors

	Factors—	This Month— Last Year	This Month— This Year	Index (a)
1	Daily Average Crude Production (Thous. Bbls.)	2,572	2,129	83
2	Total Crude Stocks (Thous. Bbls.)	535,167	509,185	95
3	Refinery Crude Runs (Thous. Bbls.)	80,163	70,026	87
4	Crude Imports (Thous. Bbls.)	5,450	4,353	80
5	Crude Exports (Thous. Bbls.)	1,808	1,919	106
6	Posted Price 36 gravity Mid-Continent Crude (Bbl.) (b)	$1.45	$.95	66
7	Wells Drilled*	1,918	1,156	60
8	Oil Wells Completed*	1,142	519	45
9	Initial Crude Production* (Thous. Bbls.)	685	797	116
10	Gasoline Production (Thous. Bbls.)	36,654	32,708	89
11	Gasoline Yield—Average Per Cent of Crude (d)	41.03	42.08	103
12	Domestic Gasoline Consumption (Thous. Bbls.)	25,791	26,844	104
13	Gasoline Imports (Thous. Bbls.)	1,079	1,116	103
14	Gasoline Exports (Thous. Bbls.)	5,527	4,903	89
15	Gasoline Stocks at Refineries (Thous. Bbls.)	49,676	42,818	86
16	Refinery Price U. S. Motor Gasoline, Group 3 (Cents) (c)	6⅞	4¼	62
17	Natural Gasoline Production (Thous. Bbls.)	4,410	4,140	94
18	Natural Gasoline Stocks (Thous. Bbls.)	611	606	99
19	Price Grade "A" Natural Gasoline, Group 3 (Cents) (c)	5¼	3½	67
20	Imports all Refined Oils (Thous. Bbls.)	3,806	3,601	95
21	Exports all Refined Oils (Thous. Bbls.)	12,037	10,091	84
22	Total Stocks all Oils (Thous. Bbls.)	693,833	662,196	95
	Weighted Index of Supply	.....	.....	95
	Weighted Index of Demand	.....	.....	88
	Weighted Index of Prices	.....	.....	65

*Exclusive of Rocky Mountain area.
(a)—Last Year—100.
(b)—Weighted Average.
(c)—Monthly Average.
(d)—Straight run and cracked gasoline only.

Answers to The Oil Weekly's Question

"WHY?"

THE following letter was written by an executive of a large Mid-Continent Oil Company who requested that his name not be used.

"The inquiry on page twenty-three, March 6th issue of THE OIL WEEKLY, rather leaves the impression that there is some mystery in the oil industry's situation.

"Excessive stocks of gasoline made in the winter of 1929-1930, decreased consumption in 1930, increased yield of gasoline from barrels of crude run in 1930, and increased imports of gasoline in 1930, are exactly why conditions are as is.

"The records may disclose that there was not much change in retail prices during 1930, but actually you will find that nowhere in the country did schedules mean anything, as rebates and concessions were allowed in such sums that the decline in gross revenue was equal to the decrease in crude oil price."

With reference to the above, the assumption as indicated that the producer who has cut his daily production to the point where it is now 872,550 barrels a day lower than it was in August, 1929, must suffer for the actions of the refiners who ran more oil to stills than they should have. However, it should be remembered that in 1930 gasoline stocks were reduced by 2,716,000 barrels, whereas in 1929 there was added to storage more than 10,000,000 barrels, and that today they are lower than they were at this time last year by 6,858,000 barrels. Thus it will be seen that even the gasoline situation, bad though it may have been, has been improved.

We can not feel that the above constitutes a satisfactory answer to the present situation, although it could have a contributing effect.

WHY?

(Reprinted from The OIL WEEKLY, March 6, 1931)

IN August, 1929, the daily crude oil production of the United States was 2,973,450 barrels per day.

The price of 36 gravity Mid-Continent crude oil at that time was $1.45.

As a result of heroic efforts on the part of oil producers toward proration and curtailment, the daily crude production had been cut on February 21, 1931, to 2,165,250 barrels, a decrease of 808,200 barrels.

During 1930 22,467,000 barrels of crude oil were taken from storage and 62,129,000 barrels of crude oil and 16,927,000 barrels of gasoline were imported from foreign countries.

During the period from August, 1929, to February, 1931, the retail gasoline market was not materially lowered. Indeed, in some sections it showed an increase.

Yet on February 20, 1931, the crude oil market in the Mid-Continent had dropped to 95 cents a barrel for 36 Gravity oil.

Many are saying that this reduction in the crude oil market is poor pay for the efforts toward curtailment and proration that have been made.

Summarizing the figures with reference to production decrease, crude oil storage decrease and comparing them with the crude oil price decrease, *The* OIL WEEKLY is led to ask:

"WHY?"

"AS an independent producer from hundreds of stripper wells in Southern Kansas and Oklahoma, I'll tell you 'Why.'

"It is a well known fact that Standard Oil Company of New Jersey dominates both crude and refined prices, and is a large importer of cheap South American oil.

"Since they sell their products through their own filling stations, it matters not to them whether their producing or refining branches show an operating deficit, since their marketing, or filling station end, makes all the longer profit. In the depressing year of 1930, Standard Oil Company of New Jersey paid the largest dividends in history, most of its 'blood' money wrung from the pockets of thousands of near bankrupt producers!

"No chance for a tariff or an embargo on foreign oil. Their highly paid 'office boys,' with the prefix of Congressman or Senator to their names, saw to that, and obeyed orders.

"There is one solution. Their 'playhouse' *can* be broken up. Wholesale gasoline is less than 4 cents at Tulsa, and should be retailing, including the *normal* 2 cent filling station profit, at 11 cents in Kansas City, instead of present price of 15 cents. This is true in every locality.

"If the independents would *do* this, it would *force* Standard Oil Company of New Jersey to allow their producing and refining branches to make a fair profit. At present price of gasoline, oil should bring $1.50, and wholesale gasoline 7½ cents. Dividends are paramount with big companies, and by *forcing* this issue, crude would bring on economically sound price, a measure of prosperity would ensue to thousands upon thousands of producers and oil field workers, thousands of royalty owner farmers, and continued curtailment would be justified.

"The present practice of price fixing in allowing the marketing or retail end to make all the profit *must* be broken up, and this foregoing plan is the logical way."

Yours very truly,

(Signed)

JAMES O'NEILL BRUEN,

General Manager, Rigdon & Bruen Oil; Pep Gasoline Company, Inc., Kansas City, Missouri.

The forced reduction of gasoline prices as a solution to the present dilemma of the oil industry, does not appeal to THE OIL WEEKLY as being sound. We seriously doubt if oil marketing companies are making as much profit per gallon of gasoline today as they were three or four years ago. This is due to the one big cause as THE OIL WEEKLY sees it, back of the present situation, a cause with which we expect to deal in next week's issue.

"I VENTURE the following answer to the question on page 23 of your issue of March 6:

"Because of human selfishness. Because a few producers lacked the courage and fairness to refuse to sell their oil at prices below the general market, and a few refiners and promoters have continually hammered at the price of crude and at the conservation laws which, for the general good, held them, like the rest of us, in some restraint. The motive of all three was to enlarge their markets or oil reserves; and the fact that it could not be done in this manner save at the expense of others was no deterrent to them.

"The principle of ratable taking is the golden rule of the oil producer. If it had received universal respect (as it has from all fair-minded men), and no crude oil had been bought or sold below the general price scale, who can believe that the crude market would have collapsed as it has?"

Yours very truly,

C. W. TOMLINSON,

Vice-President, Schermerhorn-Ardmore Company, Oil Producers, Ardmore, Oklahoma.

It is our opinion that the above answer is getting somewhere toward the heart of the matter. Whether or not the "few refiners and promoters" referred to above actually constituted a big enough proportion of the whole to have legitimately cracked the market is a question open to debate.

"IN answering your question 'WHY?' on page 23 of your March 6th issue, I wish to add the following data to your statement.

"Prior to and in the early part of 1926 the purchasing companies and refineries were paying on an average of $2.04 per barrel for crude oil of 36 gravity.

"Wages were higher in 1926 than they are today.

"The recovery of gasoline was around 35 per cent.

"Today the gasoline recovery averages 47 per cent and wages are lower than they were in 1926.

"Add this to your statement and you sure enough have a great big 'WHY?'

"In the early part of 1926 the major companies were paying more than 10 cents per barrel for crude for every cent they received per gallon for gasoline or better than a ten-to-one ratio, and, as stated above, with wages higher and gasoline recovery 13 per cent less than it is today.

"The high points are as follows:

"Enormous stocks of oil were stored during a period of years prior to 1926 as a policy of the major companies for insurance against lean production years.

"In 1926 Panhandle, Seminole, Pecos and Winkler fields came in as major pools, and at the same time Venezuela had been developed to the extent of proving itself as an enormous potential reserve, and the leaders of the industry decided it was time to unload this stored reserve which has cost them around $3.00 per barrel or more, including carrying charges, and in order to carry out the plan they pulled the political strings at their disposal causing curtailing and prorating of domestic production under the guise of conservation so as to use imports and shut in and potential production as a constant threat to keep crude cheap and make nominations for purchases small enough to allow withdrawals from storage which after refined is selling for practically the same price as it did in 1926.

"They have planned to exterminate the independent producer and refiner and create a greater monopoly than they now have.

"The independent producer is forced to sell at whatever the monopoly cares to set a price for crude and the independent refiner with no tank wagon stations is forced to sell his gasoline in tank car lots at whatever price the major companies care to post.

"It is a clear case of "freeze out" and building up a monopoly that when completed will put the oil business in the hands of the few large corporations who will eventually own all oil reserves by virtue of putting the independent producer out of business, and then the dear public will pay 35 cents to 40 cents for gasoline as they do in South America today where price fixing has been consummated.

"Your question can be answered in a few words:

"It is a diabolical scheme concocted by money-mad and greed-infected leaders of the oil industry to exterminate independents and create a complete monopoly for the purpose of profiteering on the public.

"It is a disease called *dementia profiteeria-crucifixia.*"

W. SCOTT HEYWOOD,

Jennings, Louisiana.

THE OIL WEEKLY's figures on some of the data presented by Mr. Heywood do not coincide with his. For instance the recovery of gasoline last year was only 42.2% from an average barrel, excluding natural gasoline used in blending.

Nor is THE OIL WEEKLY prepared to agree with Mr. Heywood that the present situation is the result of a carefully thought out plan. Nevertheless we cannot but agree with him in his conclusion that the situation is going to put the oil business in the hands of a very few companies with a consequent public reaction against the oil industry similar to that reaction of a generation ago.

Other letters received too late for enclusion this week will be printed in the next issue.

Curtailment of East Texas To Come Before Commission

Fort Worth, Texas.—Renewed efforts to apply a workable proration order to flush fields in Rusk and Gregg Counties, East Texas district, is scheduled to take place when a state-wide proration meeting is held by the Texas Railroad Commission at Austin March 23. The commission's order covering general proration expires during the last week in March, and the hearing is a formality that precedes the renewal order. The East Texas fields have been included in previous proration orders of the commission, with no attempt at enforcement.

Proration leaders of the state have within the past few weeks split up into two groups in regard to the East Texas situation, with a strong element favoring a hands-off policy. The latter contend that development work has progressed to such a stage that enforcement would be impossible because of the publicly announced intentions of some operators to seek the protection of the courts against proration restrictions through temporary injunctions. The antis likewise express hopes of early dissipation of the flush life of the fields.

Hostile attitude displayed by East Texans against early attempts to introduce proration caused the matter to be deferred in December then again in January and February. Considerable political influence was introduced also. Those opposing proration asked that development work be allowed to proceed along the 25-mile stretch of potential oil area until the magnitude of the oil area could be ascertained. While this has been taking place more than 100 companies and separate groups of operators have become involved with projects that must be carried through without restrictions, or financial ruin will follow. More than a half dozen refineries have been started in the district in anticipation of procuring contracted oil deliveries, while more than a score of tank car racks, with pipe lines connecting to one or more of the fields have been completed, or are underway. Having obligated themselves through long time contracts to sell oil to the above projects, the operators are waging a race in drilling for a full share of the known flush production.

Those favoring proration of the East Texas fields at any cost are likewise plentiful in numbers, and are to make a strong fight to clamp down the proposed restrictions on both drilling and production. Included in this group are a number of well owners in Rusk and Gregg Counties that have avoided making crude contracts at prevailing low

(*Continued on page 111*)

California Exposition For Engineers Methods and

E. G. LENZNER
who is largely responsible for the success of this exposition

LOS ANGELES.—Engineering features both in equipment design and operating methods will be presented at the Second Annual Oil Equipment and Engineering Exposition which will be held in Los Angeles from March 16 to 22, 1931. The various technical societies have planned interesting meetings where data of value to every branch of the industry will be presented. An export meeting is creating considerable interest among manufacturing companies and a meeting of the Independent Association of California is being given a great deal of attention by oil men from all over the state.

W. R. MARTIN
President, Martin-Decker Corporation, chairman Export Committee

The American Welding Society will hold a meeting of its Pacific Coast Division in the technical hall of the exposition at 6:30 p. m. on March 17. This will be preceded by a dinner and will consist of several papers dealing with both the oxy-acetylene and electric arc methods for welding. Welding has taken an important position in both field and plant operations and has been found to be an effective and efficient procedure adaptable to construction and repair work. Its value will be pointed out and the many ways in which it can be applied will be described. During the day, interesting demonstrations of both gas and arc welding will be put on under the jurisdiction of the American Welding Society.

CLYDE ELLWOOD
Vice-president, Axelson Manufacturing Company, Ltd., chairman of the Producing Equipment Division

During the afternoon of March 18, the American Institute of Mining and Metallurgical Engineers will hold a "Straight Hole Meeting." Five interesting papers will be delivered and will discuss the various instruments that have been developed for combating the crooked hole problem, both the surveying of completed wells and the use of instruments for keeping drilling wells straight will be discussed.

There will be considerable discussion of the methods being used for obtaining the direction at which a well has deviated from the vertical. During the past year or two increased attention has been focused on the development of instruments for use in wells that are drilling. By means of these, the amount of inclination is measured at desired intervals and, from the data thus obtained, holes have been straightened and have been kept in a vertical direction. The success obtained with these instruments will prove of interest to all who are connected with drilling operations and the Institute welcomes all visitors to its meeting.

T. SUTTER
General manager, Baker Oil Tool, Inc., chairman Rotary Hole Equipment division

Export Meeting

An export meeting will be held in the evening of March 18 that will be of vital interest to all manufacturers of oil equipment who are interested in the foreign markets. It will be held in the technical hall off the main building. Several speakers will present information and data relative to conditions affecting the use of American equipment in the various countries throughout the world where oil is produced. Roy E. Leigh of the Gulf Publishing Company,[1] who has just returned from a two years' survey which took him to every important oil field in the world, will present information that he has prepared in reply to a questionnaire which was sent him by a committee that was

G. T. BROOKE
Crane Company, chairman Valves and Fittings Division

[1]Publishers of The Oil Weekly.

Offers Opportunity to Study Latest Equipment

W. J. BLANKENSHIP
Technical Manager of the Oil Equipment and Engineering Exposition

organized to arrange the program. This committee consists of W. F. Martin of Martin-Decker Corporation, chairman; T. Sutter of Baker Oil Tools, Inc.; L. C. Harbert of J. P. Ratigan Company; B. A. Cleveland of Regan Forge & Engineering Company; and C. Homer Spotts of McEverlast, Incorporated.

Ray Dudley, president of the Gulf Publishing Company,[1] will furnish the group assembled with data which he has recently collected in an extended trip throughout the United States where contact was made with all export offices. Other speakers will include V. M. Korobovkan, technical director of Amtorg Trading Corporation and W. Cole, foreign representative for Byron-Jackson Company.

GEORGE RATCLIFF
General Manager Baroid Sales Company, Chairman Rotary Fluid Division

There are many phases of the export trade which are not fully realized. These include the patent situation in foreign countries, the social and governmental influence on oil operations, the economic factors which will affect the immediate future and other matters of interest, such as servicing equipment in foreign fields, proper installations, warehousing, and distribution. All of these subjects will be treated in detail.

A meeting, conducted by the Independent Petroleum Association of California, under the direction of W. E. Dunlap, executive director, and Robert L. Smith, assistant director, will be held on March 19. This is a co-operative organization which will represent the independent operators as one unit. The aims and activities of the association will be presented at this meeting. It points out that, although an adequate tariff on oil is the center of public interest and attention at the present time, this issue is by no means a panacea for all the ills of the petroleum industry; there are many federal and state laws being proposed that will directly and seriously affect the industry and these cannot be coped with individually but must be dealt with collectively by those whose interests are concerned.

C. J. COBERLY
President Kobe, Inc., Chairman Tubular Goods Division

Natural Gasoline Meeting

California Natural Gasoline Association will meet on March 19 at the Hotel Alexandria. This will be preceded by a dinner and will include several papers of pertinent interest to all plant and field men who are connected with the manufacture of natural gasoline. This association will also have a booth at the exposition and will have engineers in attendance who will be able to furnish instructive data relative to this phase of the industry. The broad scope of the work being performed by this association has lead to the accumulation of much valuable information which is available to assist the solution of problems relative to natural gasoline manufacture.

J. A. KAMMERDINER
Chairman Fishing Tool Technical Division

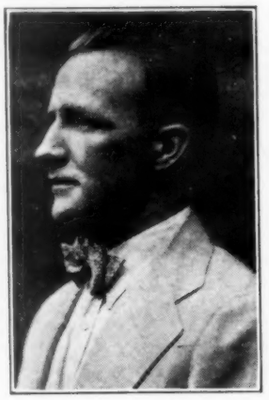
C. HOMER SPOTTS
Sales Manager McEverlast Company, Chairman Pipe Coating Technical Division

On the evening of March 20 the Southern California Meter Association will hold a dinner in the meeting room at the exposition and will follow this with the reading of several papers relative to the measurement, regulation and control of gas. Great strides have been made in the measurement and control of gas and in its more economical application to field and plant operations.

A second meeting to be held on March 20 is the semi-annual meeting of the Pacific Coast section of the Division of Production of the American Petroleum Institute. This

LAWRENCE WHITMAN
Office Manager

HALL HILL
Petroleum Engineer, General Electric Company, Chairman Electrical Equipment Technical Division



W. A. SAWDON
Editorial and Publicity Manager

J. C. BLAKE
District Manager, Victor Welding Equipment Company, Chairman Welding Equipment Technical Division

will be held at the Engineers' Club where it will be preceded by a dinner.

Three papers have been scheduled for this meeting. One of these is on rig foundations and cellar design and will deal particularly with the Kettleman Hills field. As greater depths are drilled, more attention must be paid to the design of rig foundations and to the layout of cellars. The heavier equipment necessarily used on the very deep wells has brought in various factors that demand serious consideration.

The two other papers deal with vapor recovery. The first will treat this subject from the theoretical standpoint while the second will be confined to its practical application.

Many demonstrations on the outside space at the exposition will give the visitors an opportunity to witness recent developments in methods and equipment. Two systems for extinguishing and controlling fires will be shown and will indicate the most recent developments in this very important phase of the industry. Other individual and specific demonstrations such as the application of pipe coating, insulating boilers, etc., will also be conducted. These features, together with the inside display of every type of equipment, will emphasize the value of engineering application to petroleum operating methods.

Announcement has been made of a joint meeting of the Associated Advertising Clubs, the Los Angeles Chamber of Commerce and the Oil Equipment & Engineering Exposition at the Biltmore Hotel in Los Angeles on March 17 at 12 o'clock, noon. Following a luncheon, several addresses will be given by prominent men from the United States and foreign countries.

Invitations have been sent to Ray Lyman Wilbur, Secretary of the Interior, and to Governor Rolph. Other speakers will include men prominent in the oil industry, representatives of foreign oil companies and one of the directors from the Independent Petroleum Association.

C. D. COULTER
Southwestern Engineering Corporation, Chairman Refining Division

A. B. LEONARD
Haynes Stellite Company, Chairman Hard Facing Division

ALEXANDER ANDERSON
Chairman Instrument Division

Late Equipment Arranged For Exposition Display

MORE of the heavy type of equipment will be displayed this year at the Second Annual Oil Equipment and Engineering Exposition which will be held in Los Angeles from March 16 to 22, 1931. There is, however, an increase in all kinds of tools and machinery being shown over last year. The fact that it is the only oil exposition during the year has probably added to the interest being displayed and manufacturers have taken advantage of the opportunity to present late designs of equipment for all branches of the industry. Many new pieces will be shown for the first time during the show and considerable stress is being placed on the engineering features incorporated in design and construction.

The majority of the exhibits are already in place and ready for the opening of the exposition, many manufacturers having displays in the permanent exposition. This not only facilities the installations for the annual show but also permits of a more elaborate and comprehensive showing of equipment.

The equipment being shown is most comprehensive in scope and includes the largest and heaviest types down to the smallest accessories. On the outside space a derrick with a complete drilling rig has been installed. Even within the main building a complete drilling outfit will be in operation and, since this involves the hydraulic principle, it will demonstrate all of the controls as well as the rotary table, drawworks and prime mover. Many types of derrick equipment such as crown blocks and traveling blocks, unassembled parts of drilling rigs and other smaller pieces will be displayed. Every type of steel rotary hose will be presented for the oil man's attention and the details of construction will be shown.

Drilling Bits

All kinds of drilling bits will be exhibited and will include the various makes of rock bits, specially designed bits, and the several types of core bits. Other rotary hole equipment will be shown and among the interesting pieces will be types of cementing equipment, underreamers, fishing tools of all descriptions and other special tools. Wire lines

NEW EQUIPMENT FEATURED AT CALIFORNIA EXPOSITION

will be shown and their construction indicated. All types of weight indicators now on the market will be presented for examination.

Rotary drilling fluid is receiving considerable attention in the industry. Its control is being given increased study and all equipment that will assist in furnishing a better fluid is of interest. Authomatic recording mud scales will be on display and admixtures both for supplying weight and colloidal properties to the drilling fluid will be explained and demonstrated.

Boiler Installations

Actual boiler installations will be confined to the outside spaces but boiler insulation will be shown both there and within the building.

Several pumping units have been set up and will be shown in operation. There are two or three new designs which are just being presented to the industry. These have been installed in the main building.

Tanks for use both on producing leases, for gasoline plants and for refinery uses will be shown by means of models, and their construction disclosed by sections. The several methods for treating oil will be demonstrated and engineers will be on hand to explain the principle of electrical hedydration.

The exhibits of tubular goods will include tubing, casing, line pipe and screen pipe. The use of alloy casing has been found advantageous for the completion of many of the deep wells and the high tensile and collapsing strength of casing is a matter of interest to all operators. A.P.I. specifications for tubular goods is receiving a great deal of attention and the application of these specifications will be clearly shown by the many specimens on display. New perforators have been designed and several machines for slotting pipe will demonstrate this operation.

Manufacturing Equipment

The natural gas industry is being developed with rapidity and greater attention than ever is being paid to the measurement and control of gas. New types of orifice fittings will be on display and one of these will be introduced for the first time. Regulators will be shown with cutaway sections so that the visitor may get a comprehensive idea of the operation of the various makes. Orifice meters and control instruments will be exhibited and many valuable data on gas measurements will be made available by the manufacturers of this type of apparatus.

Equipment for both the natural gasoline and refining industries is being given considerable attention. Several types of anticipating temperature controls will be on display; this type of instrument is being studied carefully. Both electrical and gas operated controls for pressure, temperature and volume will be shown and several types of pyrometers will be exhibited.

Examples of cooling towers will be shown both as models within the building and as used in actual plant installations on the outside space. One design involves some radical features and is expected to arouse considerable interest among both natural gasoline manufacturers and refiners. Many types of absorbers and gas traps will be exhibited and several of these will be furnished as glass models placed in service in order to show the internal mechanism and their operation under field conditions.

Prime movers for all branches of the petroleum industry will include those using gas, gasoline, steam and electricity for their power. Several new designs in spark proof motors will be exhibited. All types of prime movers for use under hazardous conditions are being designed with an aim toward the elimination of danger. The developments in this respect have been rapid during the past year and several interesting new designs will be shown.

The operators are paying much attention to the character of the material of which the equipment is being made. Foundry displays will offer several educational features and will present data relative to the metal requirements of various types of equipment. The technical features of this subject will be adequately explained and it is felt that these exhibits will be beneficial to all users of oil equipment.

Welding has become an important factor in all phases of the oil industry and rapid developments have been made for its application in both construction and repair work. Equipment for both oxy-acetylene and the electric arc method will be shown together with various types of generators, rods and all kinds of accessories. Portable testing machines for determining the tensile strength and the bending strength of welded sections will give demonstrations and will prove of value in showing the strength that can be attained with proper methods of welding.

Valves and fittings of all descriptions will offer interesting data for the visitors. With the deeper drilling and the higher pressures encountered the material and construction of valves is becoming of great importance. Safety is a factor that must be considered in every branch of the industry and the fittings used must be able to withstand the conditions imposed upon them. New metals are being used in the construction of these fittings and the relative advantages will be seen by an inspection of those being shown at the exposition.

Instruments of various types will be presented. These will include those being used for the surveying of completed wells and for the measurement of deviation of the hole during actual drilling operations. The several methods employed for determining the direction at which a hole has wandered from the vertical will be explained and will include the methods of pipe orientation, the use of the gyroscope and the use of the magnetic compass. Instruments for all other branches of the industry will also be shown and the valuable information obtained by these devices in conducting operations will be demonstrated. On the outside spaces there will be demonstrations of fire control and extinguishing and at least two distinct methods will be shown. Many other individual demonstrations will also be conducted and will include the application of pipe coating, both gas and electric welding, and many other subjects.

Technical Divisions

The organization of the exposition includes a number of technical divisions to which operating matters of a technical nature only can be referred. The chairman of these divisions are:

Drilling Fluids—George L. Ratcliffe, California Talc Company.

Drilling Equipment—Frank R. Seaver, Doheny Stone Company.

Rotary Hole Equipment—T. Sutter, Baker Oil Tools, Inc.

Fishing Tools—J. A. Kammerdiner, J. A. Kammerdiner Company.

NEW EQUIPMENT FEATURED AT CALIFORNIA EXPOSITION

Producing Equipment—Clyde Ellwood, Axelson Manufacturing Company.

Tubular Goods—C. J. Coberly, Kobe, Inc.

Electrical Equipment—Hal Hill, General Electric Company.

Refining Equipment—C. D. Coulter, Southwestern Engineering Corporation.

Pipe Coating—C. Homer Spotts, McEverlast Company.

Valves and Fittings—G. T. Brooke, Crane Company.

Welding Equipment—J. C. Blake, Victor Welding Equipment Company.

Hard Facing Material—A. B. Leonard, Haynes Stellite Company.

Foundry—C. B. Tinnetts, Los Angeles Steel Casting Company.

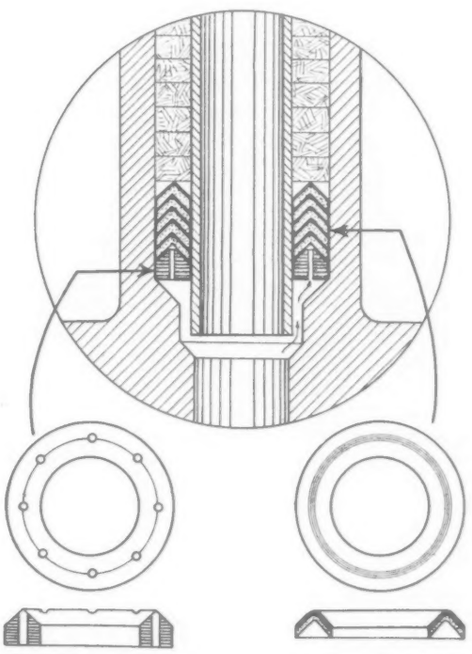
Instruments—Alexander Anderson.

The aim of both the manufacturers and the exposition is to present the oil industry with engineering data regarding the application and operation of equipment, as well as to exhibit the various kinds of equipment that have been developed. All of the latest designs will be shown and competent engineers will be available to explain the construction and operation of the various tools and machinery.

In order to enable everyone to visit the exposition as frequently as possible the admission for all who are connected with the oil industry is free. This permits a thorough examination of every exhibit and gives everyone an opportunity to spend all available time at the show without the inconvenience of paying an admission at every visit.

Swivel Packing

Robb Rubber Company, 2407 South Main Street, Los Angeles, will show a new type of swivel packing: the "Paragon perfect fluid packing," which has the feature of being automatic. It is made of specially treated material and consists of V-shaped rings resting upon a supporting ring. When the cup rings are subject to pressure they tend to flatten or increase in diameter. This causes them to form a tight seal around the lower end of the wash pipe and, consequently, prevents any leakage of fluid around the rings.

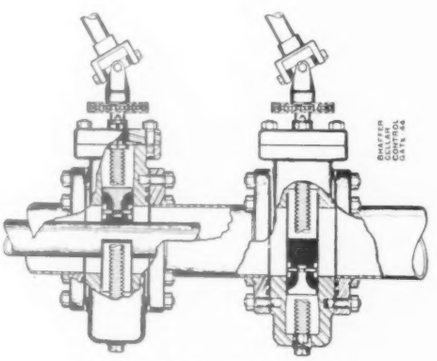


Robb Rubber Packing

The outstanding feature is that the fluid pressure not only reacts upon the supporting ring but is also carried up through holes in the supporting ring to the first cup ring. In actual service the fluid does not pass the first cup ring. The packing is made to fit any type of swivel without alteration. Since it is automatic, no tightening of glands or other adjustments are ever necessary and its construction insures long life. It is designed to take care of the difficult duties imposed upon the swivel packing by deep drilling and is therefore an ideal packing for meeting all conditions encountered on any well.

Cellar Control Gate

Shaffer Tool Works, Brea, California, will exhibit many new and improved oil tools, featuring particularly working models of the Shaffer Cellar Control Gate, as well as working models of the flow bean and various fishing tools.



Shaffer Cellar Control Gate

A working model of the Shaffer Kelly Stop Cock will be shown. This model will be operated under pressure showing the method of testing. A complete line of control heads including the famous Warren Head will be exhibited. Several T. & T. fishing tools are presented. The Releasing Socket, the two- or three-Slip Spear and the Expanding Pin Tap. The Shaffer Pump Trip Hydraulic Jar, the newest addition to the Shaffer line of fishing tools, will be given prominent space.

Piston Rings

The American Hammered Piston Ring Company, Baltimore, will feature as its chief exhibit a concave, step seal, segmental ring with a steel expander spring, which has proved of considerable interest to the engineers in the oil fields.

The company will also exhibit the new type Cronin Inner Seal ring which was developed by Mr. Cronin of San Francisco for the marine trade, and which has been found very adaptable to the severe service in the oil countries. The step seal single piece ring will also be emphasized. The usual equipment of standard rings which are popular in the oil fields will be shown along with these new exhibits.

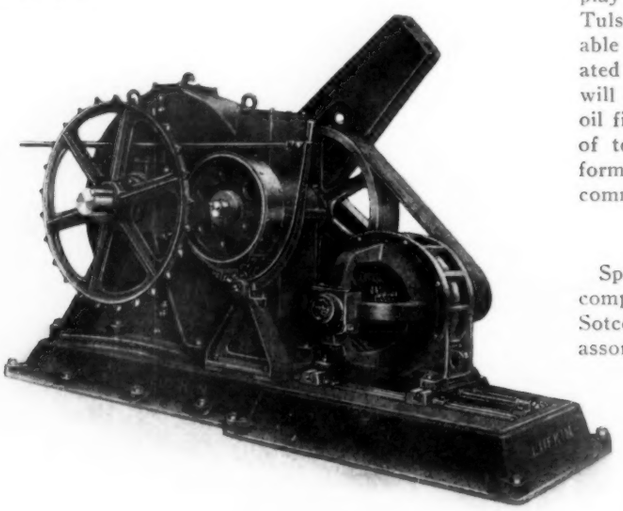
NEW EQUIPMENT FEATURED AT CALIFORNIA EXPOSITION

Valves

Walworth Company, Boston, will feature several new items. One is a line of lubricated plug valves for pressures ranging up to 1500 pounds. The lubricated plug valve is a quarter-turn valve, with lubrication forced in under pressure between the plug and body. This lubrication prevents the valve from sticking and also prevents foreign substances from damaging the seating surface. This represents an entirely new line for the company, and the Los Angeles exhibit will mark the first time the line will have been shown at any exposition.

The second item to be featured is a 6000 pound test flow line valve, which has no gasket between the body and bonnet connections and stuffing box flanges. Instead of a gasket there is in each of these flanges a male and female facing with beveled sides. When the flanges are bolted together, these facings wedge together, making a tight joint. They are particularly recommended for deep wells, operating at extremely high pressures, where gasket type valves have a tendency to blow out.

The third item featured is the new Walco Wrench. The bar and frame are of drop forged steel and of one-piece construction.



Lufkin Units

Lufkin Foundry & Machine Company, Lufkin, Texas, will exhibit the very latest design of both Herringbone and Worm Geared units. There will be shown a cut-away unit of the Herringbone Gear showing interior working mechanism; perfected policy, of oil system and type of bearings used.

For those interested in pumping shallow wells, the company will have on exhibition a Junior Herringbone Geared Unit, connected with Lufkin No. 2 post assembly, consisting of Post, I-beam type Walking Beam and Universal Pitman, which will be running and equipped with a 10-horsepower motor with V-belt drive. A dis-assembled Universal Pitman showing all of its working parts will also be on display.

Rotary Jar

A. C. Baimbridge, 124 West 88th Street, Los Angeles, will display a new type rotary jar. It is a drive down jar, and is designed for such rotary operations as perforating pipe, vibrating, loosening stuck strings, regaining circulation and for those fishing problems which can be overcome with a sharp powerful down blow.

The jar is run on either the drill pipe or on tubing and utilizes the weight of the pipe above it to give the downward blow. It consists of a hammer member and an anvil member. In operating, the pipe is turned until wing-ways on the hammer member become opposite wings on the anvil member. This allows the pipe to fall and impart a sudden powerful blow upon the tools immediately above which it is placed.

There are no complicated mechanisms involving springs or hydraulic action incorporated in this tool. It is rented in the United States and sold to foreign oil companies.

Wire Rope

Broderick & Bascom Rope Company, 4203 North Union Building, St. Louis, will have a display showing the same exhibit which appeared at Tulsa last fall, and which attracted much favorable comment. Donald E. Dickey, now associated with the company's engineering department, will devote particular attention to the California oil field. He was for a number of years assistant engineer of tests of the General Petroleum Corporation and also formerly national secretary of the A. P. I. standardization committee on wire rope and cordage.

Fishing Tools

Specialty Oil Tool Company, Los Angeles, will show its complete line of fishing tools and its latest specialty, the Sotco Mud Weight Recorder. The exhibit will include an assorted collection of "fish" recovered from various wells with the company's tools.

The Sotco Mud Weight Recorder consists of but two major parts—a weight element and a recording element.

The weight element is maintained at a certain constant depth of submergence by a float which is attached to the element by a brass pipe of a definite length.

The weight element consists of an air chamber separated from the fluid by a specially designed rubber diaphragm. When submerged, the hydrostatic pressure exerted on this air chamber is, of course, dependent on the specific gravity of the fluid surrounding it as well as on the depth of submergence, and the air pressure on the inside of the chamber will exactly equal and balance the hydrostatic pressure on the outside.

This air pressure is then conducted through a 100-foot length of ⅛-inch O.D. copper tube to a 24-hour recording gauge that has been calibrated to read mud weight in pounds per cubic foot.

Other items which will be exhibited by Specialty Oil Tool Company include the Sotco Hydraulic Knuckle, Sotco Adjustable Grab, Sotco Socket-Combination Trip and Pack-off, and Sotco Hydraulic Wall Hook.

NEW EQUIPMENT FEATURED AT CALIFORNIA EXPOSITION

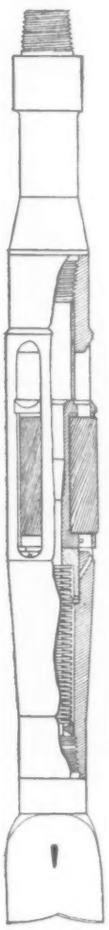
Pipe Fittings

Stockham Pipe & Fittings Company, Birmingham, Alabama, will feature the Stockham return bend for cracking stills, which has been exploited by the company the past three years as part of the company's policy to have a full line of fittings adaptable for the petroleum field.

For years Stockham cast iron and malleable pipe fittings, especially designed for oil production and refining use, have been widely used because they adequately meet the severe conditions to which fittings are exposed in every phase of oil work.

Several years ago the Stockham line was augmented with cast electric steel fittings, both screwed and flanged, which also meet the demand for the high temperatures and pressures which have come into more general use.

With the Stockham return bend any individual tubes in the bank may be removed for replacement or repair and it is also a simple matter to take down the still for cleaning. Because of the unique joint the tubes are very readily removed.



Grant Type "C" Underreamer showing the cutter control collar in place, making a reamer out of an underreamer

Underreamer

Grant Oil Tool Company, manufacturers of underreamers and a complete line of oil tools, will display the Grant Type "C" Underreamer and the Cable Tool Underreamer, the Grant Cement Head, Liner Puller, Endurance Bits, All-Steel Rotary Hose, Straight Hole Guide, Safety Automatic Pressure Release, Polish Rod Clamps.

A feature of the Grant Type "C" Rotary Expansion Underreamer of Expansion Underreamer of particular interest to operators from the standpoint of economy is the fact that it is really two tools in one. In other words, it can be used as an underreamer or as a straight reamer—the change being effected by the substitution of a cutter control collar for the upper sleeve. This feature requires the purchase of only one tool to do two jobs—reaming or underreaming—and it is only necessary to stock parts for the one tool, it is said.

Experienced oil tool men will be on duty at the Grant exhibit to explain the operation of Grant equipment.

Oil Froth Absorber

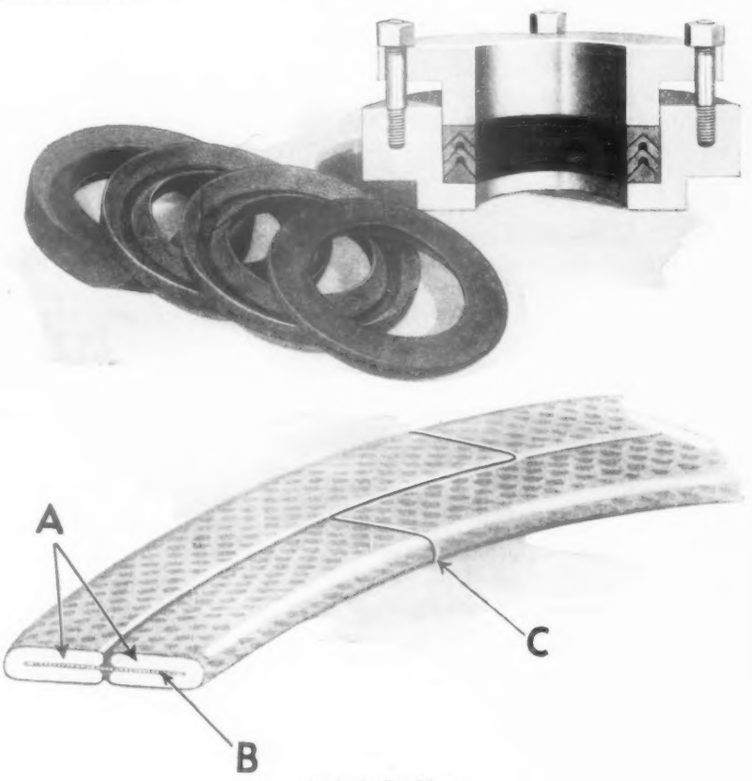
J. A. Campbell Company, natural gas engineers, Long Beach, California, will exhibit the Campbell "Oil Froth Absorber," an entirely new design of plate which has been recently developed.

Another glass-shell model will show the "Mist-D-Fier" scrubber in action. A working model of the C. & B. Air-Cooled floating roof for tanks will be shown. The exhibit will also include samples of the various items of C. & B. Tank Truck loading equipment, representing a complete set of accessories for conveniently and safely loading and unloading tank trucks; the C. & G. remote float control; and the Campbell Cool-R-Units, a reduced scale model of the Campbell all-steel welded open cooling unit to be exhibited.

Packing

Garlock Packing Company, Palmyra, New York, will feature these new products: Garlock Chevron Packing and Garlock Button Hole Tape. The mentioned packing, which adjusts itself automatically, was designed for packing satisfactorily the rams and plungers of accumulators, presses, pumps and other heavy duty hydraulic equipment.

The Garlock Button Hole Tape is particularly well adapted for use on flanged tanks of large diameter, being easy to apply, simple in construction, mechanically correct, positive in action, and economical in cost. The insertion of a knife blade between two parallel sections of the tape cuts the bonding fabric, forming a button hole which slips readily over the bolt or stud. With no tools other than a knife any workman can quickly make a perfect gasket which will remain in place, fit correctly, lie flat and form a positive seal around every bolt.



Garlock Packing

NEW EQUIPMENT FEATURED AT CALIFORNIA EXPOSITION

Orifice Fitting

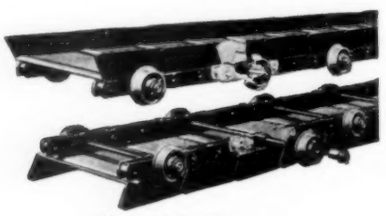
Commercial Iron Works, 2424 Porter Street, Los Angeles, will feature the "Commercial" orifice fitting, which is used primarily in the oil and gas industries. It is needed

Commercial Orifice Fitting

wherever the orifice method of measurement is used, requiring frequent changes or checking of the orifice plate without interrupting the flow in the pipe line. Its principal value lies in its ease, rapidity and safety of operation, and its relative low cost.

Conveyor

Chain Belt Company, Milwaukee, in addition to the line of Rex Deepwell Chabelco Chain, will also exhibit a new sample pan conveyor. This new conveyor is of leak proof construction and is especially designed for the handling of petroleum coke. The conveyors are provided with rugged, tight fitting, overlapping steel pans with telescoping ends



Chain Belt Conveyor

electrically welded to form a one piece pan. These pans are mounted by equalizing saddles on two strands of steel roller chain. Outboard rollers made of white iron revolve on hardened steel bushings.

Besides the Rex Pan conveyor sample, the Chain Belt Company will have a moving exhibit of Rex Deepwell Chabelco showing how these chains are engineered to fit and flex over sprockets properly. These chains are built to a very close tolerance and are assembled by hydraulic presses. Each link is inspected for defects. They are made of the highest grade heat treated alloy steel.

Also there will be shown a Rex Stearns Anti-friction belt conveyor idler designed for use in refineries and power plants for the handling of coal, coke and other bulk materials.

New Orifice Fitting

Daniel and Company, 1900 Santa Fe Avenue, Los Angeles, will display a new orifice fitting that is distinctive in many respects, and which is made for all sizes of lines from two-inch to 24-inch. The one design is suitable for both high and loy pressures. It is adaptable to gas, liquids and steam and its operation is not influenced by the difference in temperature caused by the medium passing through it.

Orifice plates for use in this fitting are manufactured by the company but any standard one-eighth-inch plate as used throughout the industry can also be used. The use of the thin plate is naturally advantageous.

The simplicity offered for the removal and insertion of plates is the fitting's outstanding feature. Only one wrench is necessary. The entire fitting is exceptionally compact with no extensions beyond its main body.

Attention is called to the shut off feature which has been designed for the most severe conditions encountered in the various phases of the oil and gas industry. It is designed for continuous service and long life. Many of the parts are made of stainless steel.

Pipe Wrenches, Cutters

The Ridge Tool Company, Elyria, Ohio, will feature its pipe wrench with guaranteed housing, also pipe cutters and vises. The "Super Six" wrench works well in close quarters where regular wrenches are not satisfactory, for example on concealed piping, close under floors, against walls, or in narrow trenches, short handle and short turning movement allowing this. This wrench with two-inch and six- inch pipe capacity consists of a trunnion with teeth and chain grip, and a housing connected to a special handle no longer than a 36-inch pipe wrench.

Drilling Muds

Baroid Sales Company will feature a miniature derrick and a mud-circulating system in which there will be circulating a 125 pound per cubic foot Baroid and water mud. This company now distributes both Baroid and Aquagel, the latter product having been formerly handled by the California Talc Company.

Other features of this exhibit will include drilling muds of various weights and consistencies prepared to provide visual demonstrations of the characteristics of both Baroid and Aquagel; a demonstration of wall building action in the open hole in which the type of wall deposit from the ordinary mud and from the Aquagel-laden mud are compared; and all the latest equipment to determine the value of drilling muds, such as devices to determine density and viscosity. In addition, charts will be available for rapid determination of the volume of the circulating system and for determination of the number of sacks of Baroid or Aquagel to be used to bring the drilling mud up to any desired weight or consistency.

The Story of

EIGHT CIRCLES

The eight circles shown below visualize the comparative number of oil and gas producer and pipe line subscribers of The OIL WEEKLY and its next nearest competitor in the five most active states, foreign fields, and the world as a whole.

The part shown in blue is the part which represents The OIL WEEKLY—the part in white shows the competitor.

More oil and gas producers and pipe line men subscribe to The OIL WEEKLY than any other oil journal.

NEW EQUIPMENT FEATURED AT CALIFORNIA EXPOSITION

Steel Rotary Hose

Champion & Barber, Incorporated, will introduce a new hose known as the "Champion Improved All-Steel Rotary Hose." According to the manufacturers, it combines all the salient factors of the original Champion All-Steel Hose with many new improvements and refinements.

Champion Nickeladium Vertical Standpipe outlet

Constructed of A. P. I. seamless tubing, with cast steel swings and swivels, the new Champion Improved Hose is tested to 5000 pounds minimum pressure, and is capable of withstanding higher pressures if such are encountered. Absolute flexibility at all working pressures is another feature of the new hose. According to the manufacturers, this hose will swivel in any direction from any rig position.

Champion Nickeladium Steel Goose neck (Plain type)

One of the outstanding features of the Champion Improved Steel Hose is the use of Nickeladium steel for all its goose necks, wing nut connections, standpipe outlets, etc. Nickeladium is a special process alloyed steel of great strength and rigidity. The Champion-Barber interests have the exclusive usage rights on this steel for rotary hose, this applying to the manufacture of fittings for other hose as well, inasmuch as they are made to fit all standard rotary hose equipment.

Champion Nickeladium Steel Goose neck with Shut-off cock

Champion Nickeladium Steel Wing-nut connection

Pumping Equipment

Chas. A. Butler Manufacturing Company, makers of drilling and pumping equipment, Okmulgee, Oklahoma, will feature Butler slip ring casing elevators, Butler automatic casing spiders, and also Butler safety tubing elevators and spiders.

The slip ring casing elevators are now made with adjustable brackets which adapt them more especially to cementing and washing down purposes, the bracket is made with adjustable jaws that hook on to the top of the casing coupling leaving the threads of the coupling open so that a swedged nipple or other connection may be screwed in to the top coupling while the casing is suspended on the elevator. The elevator may also be attached to a joint of casing with a swedged nipple or bushing already screwed into the coupling.

Butler safety slip ring tubing elevators are made more especially for handling long strings of tubing in the deeper oil developments throughout the world.

Butler automatic tubing spiders are always ready to catch the tubing should anything happen. They may be opened to allow tubing catchers or packers to pass through without removing any of the parts of the spider except the locking pin.

Valves

Jenkins Brothers, 80 White Street, New York, will feature various valves, especially the gasoline foot valves and standard bronze, globe, angle, cross and check values with the one-piece screw-over bonnet and slip-on stay-on disc holder.

Like all Jenkins globe, angle, cross and check valves fitted with Jenkins composition discs which have been widely used in gasoline service, the Jenkins gasoline foot valve is drop-tight. It will not leak and remains tight from the time it is put in service. Neither climatic variations, vibrations, nor gasoline affect it in any way. The valve does away with the trouble of frequent replacement, eliminating necessity for excavating the ground in order to get at the tank in which faulty valve may be installed. Vibration due to heavy traffic, railroads, subways or elevated lines does not affect the Jenkins foot valve.

Brake Lining

Durwyllan Company, 35-61 Kentucky Avenue, Paterson, New Jersey, will have a display consisting entirely of heavy duty brake lining for rotary drilling equipment.

The "Alltraffic" brake lining of this company is cured to prevent drum scoring, smoke and dust conditions. It has giant gripping power that can hold any load at any depth.

"Alltraffic" was developed by Durwyllan engineers after a thorough survey of the conditions surrounding oil well drilling. It is manufactured in sizes ranging in width and thickness from 7x1 to 12x1½ inches.

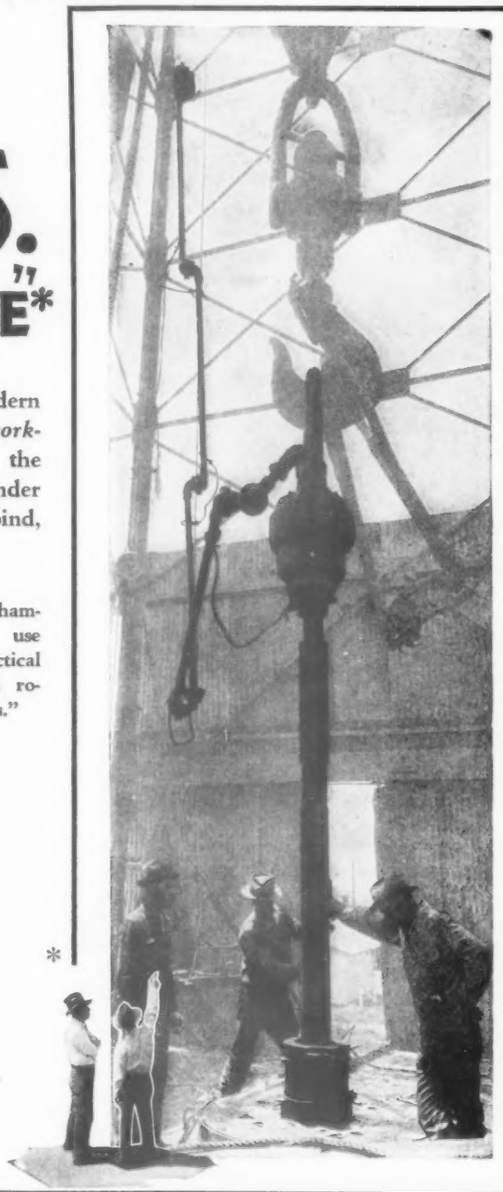
"It has Absolute FLEXIBILITY!

at 5000 LBS. WORKING PRESSURE"*

"To my opinion, there's the pressure miracle of the modern rotary drilling hose: *absolute flexibility at 5000 pounds working pressure!* . . . . But miraculous as it may seem, the Champion *All-Steel* rotary hose successfully operates under this extreme pressure . . . and it does not leak, kink or bind, and it is *safe* for your crews to use.

"You'll find the Champion *All-Steel* Rotary Hose is used from Baku to Santa Fe Springs.

"Wherever the Champion hose is in use you'll find a practical elimination of the rotary hose problems."



* Champion & Barber Incorporated, 506 Subway Terminal Bldg., Los Angeles, Calif., Telephone MUtual 2756

Mid-Continent Distributors:
BAILEY AND BECKER CO.,
410 Thompson Building,
Tulsa, Oklahoma

Gulf Coast Distributor:
BETTIS SALES CO.,
917 Merchants and Manufacturers Bldg.,
Houston, Texas

Export Distributor:
W. S. FELLOWS, 39 Cortlandt St., New York, N. Y.

CHAMPION
ALL-STEEL ROTARY HOSE

NEW EQUIPMENT FEATURED AT CALIFORNIA EXPOSITION

Roller Bearing Rock Bit

Reed Roller Bit Company, Houston, will feature the new roller bearing rock bit, which has been proved through exhaustive fields tests in the United States and foreign countries to be a successful combatant against a great enemy of all bits, friction. It incorporates roller bearings and is still a slush lubricated bit. The bearing it uses is an exclusive development of the company.

Both side cutters and cross roller cutter section are full roller bearing—in all sizes from 9⅝-inches up. In sizes from eight-inch to 9⅝-inch side cutters and the two outside cross rollers only are roller bearing. Below the eight-inch range only side cutters are roller bearing.

New type criss-cross side cutters and outside cross roller cutters with grooved long, deep, sharp teeth are a feature of this new bit. Criss-cross cutters prevent any possibility of tracking, by follow cutters attacking and breaking down ridges made by cutter preceding. New type, long sharp toothed cutters make for better penetration, assure greater cutting speed, and are assisted by grooves in same, for same purpose, as well as in keeping cutter teeth clean and free from formation penetrated.

In cross roller section, end thrust of bearings is taken by recessed cross roller pin, while end thrust of cutters is taken by space ring and specially manufactured floating wear washer, against heavy cross roller washers. On side cutters this thrust is taken by extra heavy side cutter washers provided for the purpose.

Replaceable water courses are provided through bolted in jet plate, seated in head on rubber gasket, bolted in place with four right hand threaded bolts. Large slush jets maintain perfect circulation directly on bottom of hole, while sharp jets are directed against individual cutters, and keep teeth cleaned. Bridge is drop-forged, and pin ends are made with special bearing surfaces for roller bearings. Cross roller assembly is secured in bit head by alloy steel, heat-treated bridge, bolted through wash plate. In addition cross pin bolts are passed through ends of cross roller pin and seated in side lugs of head.

Complete sets of Type 31 cutters are assembled at factory and need not be disassembled or taken apart to place in bit head; complete cutter change may be effected in less than 10 minutes. Individual parts may be purchased, thus reducing replacements, making for economy and minimum inventory requirements.

300-Ton Crown Block

Regan Forge & Engineering Company, Los Angeles, announces introduction of a 300-ton capacity crown block which will be shown at the exposition for the first time. A companion traveling block, size 76 inches, will also be shown. In order to demonstrate the relation of various operating products, a miniature derrick one-eighth scale size has been constructed and working models will be shown. The full size 300-ton crown block will be part of the main exhibit as well as the full size traveling block. Other equipment that is expected to attract a great deal of attention is the new Regan tubing control unit incorporating the tubing gas controller with snubbing attachment and the new Hi-pressure oil saver. The oil saver will be demonstrated in connection with the Regan combination type tubing head showing the practical method of raising or lowering tubing in a well under pressure. Various other Regan products will also be demonstrated.

Weld Testing Machine

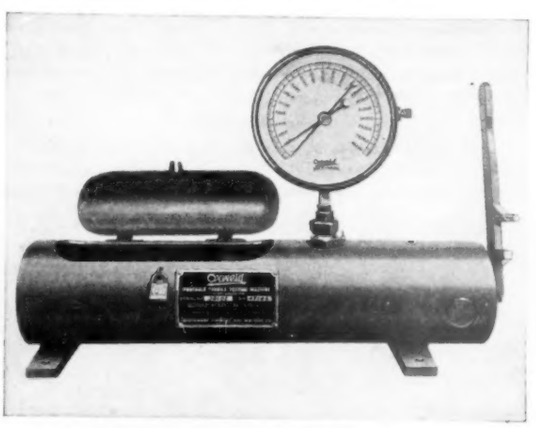
Linde Air Products Company, a unit of Union Carbide and Carbon Corporation, 205 East 42 Street, New York, will feature the "Lindeweld Process" and the "Portable Machine for Testing Welds."

The "Lindeweld Process," a new method of oxy-acetylene welding, has met with great success in the field of overland pipe line construction, where it is being used increasingly because of remarkable speed and economy which it has made possible.

Cold bend made on 20-inch diameter pipe line welded by Lindeweld process

The Oxweld Portable Tensile Testing Machine was designed to facilitate the testing of welds in the field or shop. This machine was developed in co-operation with Union Carbide and Carbon Research Laboratories, Inc., and is now being sold by The Linde Air Products Company

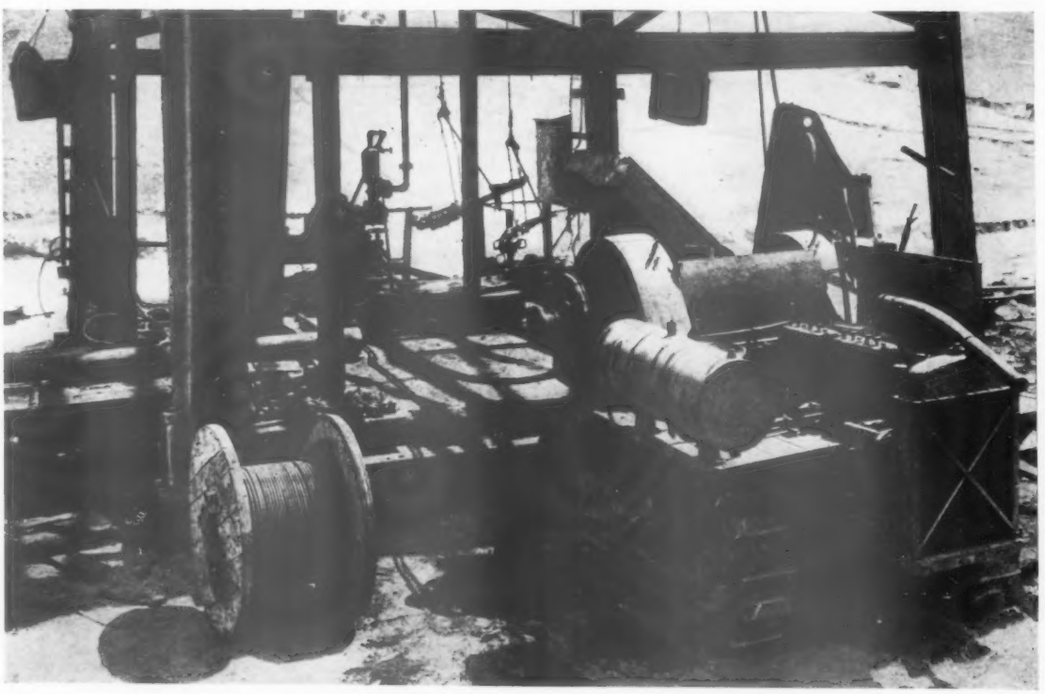
This machine weighs 165 pounds and measures 28 inches in overall length and 6¾ inches in maximum diameter. It is a self-contained, totally enclosed unit. When closed for shipment, there are no projections and the machine presents a comparatively smooth cylindrical surface.



Oxweld Portable Tensile Testing Machine

A NEW HOPPER HOIST

Pulls Tubing, Bails and Drills



This hoist is especially adapted to all oilfield jobs. It is one of the fastest portable hoists on the market. All pulling and drilling equipment can be removed from the derrick. It does that *re-drilling job* and that *bad fishing job* where you have to mill up the lost tools. In many cases it has paid for itself in redrilling and validating alone. It will do any type of work necessary on a producing well.

Line capacities are offered up to 7000 ft. of ¾" line, and will service up to 6000 ft. of 3" tubing. It has six forward speeds and two reverse, giving line speeds of from 65 ft. to 1000 ft. per minute.

Hopper Hoists are made up entirely of steel with alloy steel shafts and are one hundred per-cent roller bearing. These hoists can be fitted with extra sand reel drum upon special order.

Hopper Hoists built fifteen years ago are still in operation.

There is a Hopper Hoist to suit your specific needs.

HOPPER
MACHINE WORKS, Inc.

BAKERSFIELD, CALIF.

Cable Code: "Hopper"

Please send me complete information on your Type C Hoist. I am interested in hoists for wells of

..... depth, using ..... -inch tubing.

Name .....

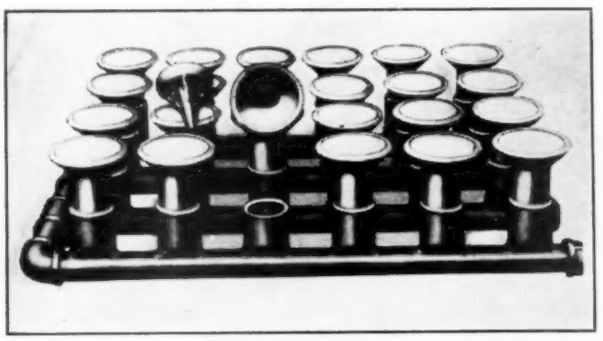
Address .....

Company .....

NEW EQUIPMENT FEATURED AT CALIFORNIA EXPOSITION

Automatic Blower Control

Badgett Steam Lubricator Company, Chickasha, Oklahoma, will feature its new automatic blower control, which has proved its value in helping eliminate boiler troubles. It works automatically in connection with burner flame, only operating when fire is hottest. It will add to efficiency of boilers and by supplying proper amount of draft at proper time serves to minimize flue leakage, reducing boiler troubles and adding to fuel economy. It works with any make of burner or regulator, being equally suitable for hand-fired boilers as with gas regulated ones.



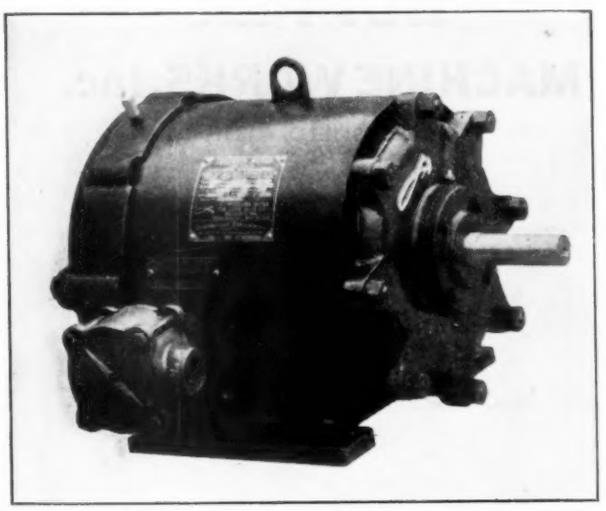
Baggett Gas Burner

Gas Burner

The Badgett Steam Lubricator Company also will show its new gas burner, suitable for oil field use under all conditions. It is a low pressure burner operating efficiently at extremely low pressures or up to three to five pounds where gas is abundant. The burner ejects an even flame and there is a size for all sizes of boilers.

Explosion Proof Motors

The Louis Allis Company, manufacturers of direct and alternating current motors, Milwaukee, Wisconsin, will feature its "explosion-proof" fan-cooled motor and "explosion-proof" air-break motor starter, both of these devices being first of their type and approved by Underwriters' Laboratories for use wherever gasoline or other petroleum products are made, used or handled.



Louis Allis Explosion Proof Motor

There will also be exhibited a 75 horsepower motor to illustrate the large size "explosion-proof" motors which are built in sizes up to 100 horsepower, a new development. In addition to the motors and starter, the company will show interesting application photographs of motors installed in large refineries, natural gasoline plants, loading rack pump houses and bulk stations in all parts of the country.

The company will also show a five horsepower "explosion-proof" motor with section cut away to illustrate some of the safety features of this motor. Briefly the three outstanding features of these motors are as follows: first, it is designed and built to prevent possible ignition with the motor from extending to surrounding vapors; second, the enclosed motor casing is strong enough to withstand any explosive pressures to which it is likely to be subjected; and third, it has sufficient "static" radiating surface so that even in case of a burnout in the absence of overload protection the surrounding vapors will not ignite spontaneously.

Hydraulic-Suction Boiler

Cavins Bailer Service of California, 2740 Cherry Avenue, Long Beach, California, will feature the Cavins hydraulic-suction bailer. This tool is one employing the vacuum principle for cleaning out oil wells not only of sand but rocks, iron and other foreign matter of such size that they will enter the openings.

Hydraulic Section Boiler

The weight of the column of fluid in most oil wells is enormous. A Cavins is the mechanical means of withholding this pressure from an empty tube until the tool is placed against the material to be sucked up. This empty tube, called the suction chamber, has another below it called the load chamber. A valve between automatically opens when the bottom of the tool is placed against the material to be sucked up. The sudden rush of the fluid through the valve into the void above (the suction chamber) sucks or draws the materials into the load chamber. As the tool is withdrawn from the well the high pressure is released but enough is retained to blow out the load.

Lubricated Plug Valve

Merco Nordstrom Valve Company will demonstrate a new lubricated plug cock valve known as the Nordstrom K2, which is for high pressure service such as Christmas trees at Kettleman Hills and for high pressure slush lines. It is a gear operated valve, completely lubricated under hydraulic pressure, and is tested to a working pressure of 3000 pounds and must meet a laboratory test of 6000 pounds. This is one of several types of Nordstrom valves that will be exhibited as well as Merco pipe joint compound and the new Merco swivel joint.

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NEW EQUIPMENT FEATURED AT CALIFORNIA EXPOSITION

Plug Valves

Merco Nordstrom Valve Company will show all of the different types of lubricated plug valves manufactured by them, and the cast steel valves for high working pressures will be featured. Improvements in the Nordstrom Valves will be introduced, particularly the "Sealdport" lubrication.

The new Merco swivel flange will also be shown in its various sizes. Demonstrations will also be made of the Merco pipe joint compound.

Cleaning

Oakite Products, Incorporated, 22 Thames Street, New York, will present economical salvaging and improved methods for cleaning serviced equipment and paint stripping practices.

A miniature model petroleum producing plant and its related equipment in actual operation will demonstrate Oakite methods for cleaning interiors and exteriors of tanks, for cleaning small parts, waste and wiping rags and painted surfaces.

Other daily and special cleaning operations graphically presented will be described to visitors at the Oakite booth by representatives of the company.

Interesting literature describing daily and special cleaning operations in the petroleum industry will be distributed at the show.

Spiralweld Pipe

Naylor Spiralweld Pipe will be on display at the booth of Champion & Barber, Incorporated, exclusive distributors in California, Nevada and Arizona.

The exhibit will consist of samples of Naylor Spiralweld Pipe, and motion pictures of various oil field installations.

Naylor Spiralweld Pipe provides maximum structural strength with minimum weight, and is made of Toncan iron. The maximum structural strength and long life of Naylor Spiralweld Pipe makes it a dependable carrier. The light weight makes it economical in transporting, handling and installing. It is made in sizes six-inch to 12-inch inside diameter, and 14-inch to 20-inch outside diameter; furnished in 20-foot, 30-foot and 40-foot uniform lengths. Naylor Spiralweld Pipe is used for conveying air, water, oil and gas.

Super Drillometer

The Drillometer Company, 507 Terminal Sales Building, Los Angeles, will display the "Super Drillometer," the new duraluminum type. Principles on which the improved Autodrill operates are: first, limit the weight of the bit on the bottom of the hole, so that it can never exceed a certain amount, for example two or three points; second, operate at constant speed of rotation of the drill stem and make this relatively high.

The Autodrill not only gives automatic drilling, but also automatic reaming and coring. It is thus fully automatic. It has the following controls: first, weight limit control, which stops the down feed of the drill stem any time the limit of weight of the bit on the bottom of the hole is reached; second, speed control, by means of which the bit is fed down whenever speed of rotation of the drill stem is slightly above normal, the drill stem is lowered, that is, the brake is released; when the speed is normal or less the brake is set; third, step control, by means of which the drill stem is lowered in steps of about 3/16-inch, instead of continuously, preventing the bit from gouging into the formation and preventing overtravel, making the control accurate; fourth, electric buffer, preventing the Autodrill from operating needlessly due to drilling in rough digging, and helping to give smooth and quiet operation.

Electric Welded Pipe

Youngstown Sheet and Tube Company, Youngstown, Ohio, in connection with the exhibit of the Republic Supply Company, 2122 East Seventh Street, Los Angeles, will show electrically welded pipe, of which the company is now in position to manufacture all sizes between 14 and 26 inches in diameter.

New Alloy

Haynes Stellite Company, Kokomo, Indiana, will demonstrate its Hastelloy alloys, new products of the company, which are corrosion resistant, and which have three grade designations, A. C. and D, each grade having distinctive physical and chemical properties.

Hastelloy A was designed primarily for its resistance to hydrochloric acid. It is an alloy of high strength and good ductility and it may be forged and rolled into sheet and other simple shapes, is readily machineable, makes excellent castings and may be welded by either the oxy-acetylene or electric arc methods. In addition to its resistance to both hot and cold hydrochloric acid of all strengths, it shows good resistance to sulphuric acid, acetic acid and other acids but it is not resistant to nitric acid.

Hastelloy C is a modified form of Hastelloy A through the substitution of chromium for a part of the iron. The effect on the chemical properties is to greatly increase the resistance to oxidizing agents, and Hastelloy C is resistant to nitric acid, to wet chlorine and solutions of oxidizing salts, while at the same time it is resistant to hydrochloric, sulphuric, acetic and sulphurous acids. The effect on the physical properties has been to reduce the malleability and it is not feasible to work Hastelloy C either hot or cold. It is produced in castings only but these are machineable at moderate cutting speeds. The alloy is tough but not hard and its toughness tends to make it drag on the cutting tool, hence the necessity for low cutting speeds.

Hastelloy D is also a casting alloy which is resistant to hot and cold sulphuric acid. It is strong and tough and has a high transverse strength and good deflection. This alloy is similar to the iron-silicon alloys so much used for acid resistant work except that it is a nickel-silicon alloy instead of an iron-silicon alloy and small amounts of copper and aluminum have been added for their effect on the physical properties. Like the iron-silicon alloys, Hastelloy D can be produced only in the cast form and it is not machineable in the usual sense of the term, although with tungsten carbide tools simple machining operations can be performed. Hastelloy D differs widely from the iron-silicon alloys, however, in that it is strong and tough, whereas the iron-silicon alloys are characterized by their weakness and brittleness. In addition to resistance to sulphuric acid, Hastelloy D shows good resistance to hydrochloric acid and at moderate temperatures. It also resists acetic, formic, and phosphoric acids but it is not resistant to nitric acid or free chlorines.

ECONOMY!

★ ★ ★

Never before has a spirit of economy more strongly prevailed than today. As in all great movements the pendulum sometimes swings too far and the value of wrought iron is occasionally lost sight of in the cheapness of less durable materials. "Pipe prescription" guards against just such a danger because it applies the knowledge of what certain piping materials have done under certain operating conditions to create balanced pipe lines, meeting varying soil conditions.

Byers Genuine Wrought-Iron Pipe is recognized as a standard of quality in

BYERS • GENUINE • WROUGHT-IRON PIPE

BYERS • GENUINE • WROUGHT-IRON PIPE

wrought iron and where corrosion takes a heavy toll in "hot spot" areas wrought iron is a true measure of economy. It is hardly a coincidence that among those superintendents who have the least trouble from "hot spots" we find staunch supporters for Byers Genuine Wrought-Iron Pipe. Our engineers may not know all there is to be known about corrosion but they will gladly share with you the knowledge gained through almost three-quarters of a century of manufacturing experience. A. M. Byers Company, Pittsburgh, Pennsylvania. Established 1864.

AN INVESTMENT – NOT AN OUTLAY

NEW EQUIPMENT FEATURED AT CALIFORNIA EXPOSITION

Baker Oil Tools

Bakers Oil Tools, Incorporated, Huntington Park, California, will display approximately 40 items, featuring particularly the Baker rotary hydraulic expansion wall scraper, the Baker rotary core barrel, Baker cement whirler shoe, and Baker cable tool core barrel.

The new Baker rotary hydraulic expansion wall scraper was designed originally to scrape mud, cement and other forms of coating from the walls of the oil sand. It quickly gave evidence of many other advantages, however, and oil men found many uses for it in addition to its original purpose.

Baker Rotary Core Barrel

The Baker Rotary Core Barrel offers a number of advantages, which are achieved through the suspending of the inner assembly or core retaining tube from the head of the outer barrel by means of a swivel connection. During the operation of the Baker Rotary Core Barrel, through the operation of this swivel connection, the core retaining tube remains stationary, while the drill barrel revolves around it.

Baker Cement Whirler Shoe

The Baker Cement Whirler Shoe gives an entirely new efficiency in the handling of the circulation of cement in the cementing operation.

The flow of the cement out through the side holes and slots, guided by the baffle plates results in a whirling, spiral flow which serves not only to give an even distribution to the cement all around the shoe and up around the casing, but also prevents channeling.

Cable Tool Core Barrel

The outer drilling barrel of the Baker Cable Tool Core Barrel is composed of three parts: drill barrel head; a drill barrel; and drill barrel shoe. The drill barrel head has a pin to screw into the box of the drill stem and is screwed at its lower end into the top of the drill barrel. Circulation holes are provided leading into a chamber which is closed at the lower end by a back pressure valve which opens downwardly. The cutting teeth are spaced irregularly to prevent key-seating, and are faced with a hard-facing metal. It is connected at the lower end of the drill barrel with a special tool joint thread, and being smaller than the inside diameter of the drill barrel, a shoulder is formed which prevents the removal of the inner core-retaining tube, which has a shoulder at its upper end. The inner surface of the drilling shoe has water course grooves to allow the free passage of fluid.

The core tube is composed of three parts: a core tube head, a core tube, and a core trimmer shoe. The core tube head is screwed into the top of the core tube, and is formed with a shoulder at its upper end. A ball check valve is used to permit the escape of drilling water trapped in the core tube as it fills with core. An inside fishing neck is provided. The core tube is heat treated and alloy steel is used for toughness. It is threaded at both ends. The core trimmer shoe is made from alloy steel and is screwed on the core tube. Made with a sharp bevel edge which is faced with a special alloy metal. A tapered split ring is mounted on the inside.

Pumping Device

Fluid Packed Pump Company, Los Nietos, California, will show a new oil well pumping device under the name of the Berkey Rodless Pump Engine. This device, which it is believed will increase production and reduce lifting costs in certain types of wells, has undergone several years of testing and experimental work by its sponsors and builders and is now being operated successfully in several wells under conditions of deep well pumping in the Signal Hill and Santa Fe Springs fields.

The Berkey Rodless Pump Engine is a gas-operated reciprocating engine, with the valves incorporated in the body of the piston, and is designed to operate any type of working barrel now actuated by sucker rods. It is placed above the working barrel at the point from which it is desired to pump the well. The gas used for operation is injected in the annular channel between the casing and the tubing, a packer being set between the engine and the pump to keep any of the injected gas from reaching the formation. After the injected gas performs the function of operating the engine, it is exhausted into the fluid column in the tubing, thereby lightening the ascending fluid and helping to raise it to the surface.

Liner Setter

Hopper Machine Works, Incorporated, Bakersfield, California, will introduce a new hoist and also several other new tools. One of these is a liner setter that incorporates some valuable features. Both the head shank and the entrance of the adapter are beveled to allow the easiest insertion possible when the liner is to be pulled. The adapter is made of solid metal with no holes through the sides. This not only makes it stronger but also permits circulation through the perforated pipe below without wasting the fluid through the adapter itself. The head is provided with packing for this purpose. The latch mechanism consists of two expanding jaws on the head piece with their two adjacent ends pivoted. As the shank enters the adapter, these two rings are contracted smoothly and gradually as they come in contact with the beveled top. When unhooking the liner, the head is turned—either to the right or to the left until it stops. It is then raised until the drill pipe will rotate one-quarter turn; then in lifting up, the tapered keys will collapse the expanding jaws and allow the head to be released.

Gas Line Supplies

Pacific Pipe & Supply Company, Santa Fe Avenue, between Seventh and Eighth Streets, Los Angeles, will show various items of new equipment, including its "Hydrauger" (a new boring tool), new orifice disc housing, Papico H. & K. Odorizing equipment, Papico orifice meter assemblies, Goetze gaskets, Van Stone nipples, pipe bends, and various types of special pipe fabrications.

The Papico orifice disc housing has recently been placed on the market. The fitting is a simple plate container provided with a unique locking device for holding the disc. This housing is used where the meter installation includes a by pass. The advantages claimed are that orifice discs may be easily and rapidly changed.

Pacific Pipe & Supply Company recently placed on the market the Papico H. & K. Natural Gas odorizing apparatus.

NEW EQUIPMENT FEATURED AT CALIFORNIA EXPOSITION

Well Surveying

Sperry-Sun Well Surveying Company, 1608 Walnut Street, Philadelphia, will exhibit a Surwell Gyroscopic Clinograph, Syfo Clinographm, Side Wall Sampler, Model Gyroscope and Scorsby Machine.

In addition to this equipment there will also be a completely equipped Surwell service truck with instrument and dark chamber for developing films immediately upon completion of a survey out in the field.

Wiggins Tools

E. B. Wiggins Oil Tool Company, 3424 East Ninth Street, Los Angeles, will feature the Wiggins disc bit, casing protector, connector press, digging combine, improved Wiggins hose coupling, improved servicing fixture, and clamp gathering device.

Wiggins Disc Bit

All moving parts of the new Wiggins disc bit are roller bearing, all wearing parts are mounted in one interchangeable assembly. The core which normally forms between discs is removed by a core breaking bit protruding from the yoke. Another feature of this bit is that there are no threaded parts to assemble and circulation is directed to the cutting edges of each disc. The discs are self sharpening and the edges surfaced so as to cut practically all formations.

Digging Combine

The Wiggins digging combine is a new combination of the straight hole reamer and roller bearing yoke type disc bit. The disc bit has over five times as much cutting surface as a fishtail, all the cutting surface is self-sharpening, and it is suitable for penetrating practically all formations.

The reamer has 26 reaming edges. Teeth are so placed that they contact the circumference of the hole and guarantee the hole being full gauge and round.

The disc bit is so constructed that by replacing worn yoke assemblies with new ones practically a new bit is made out of every used tool. Likewise changing cutters on the reamer makes it as good as new. These cutters are easily built up and are practically the only parts of the tool which require servicing.

Hose Coupling

The Wiggins Rubber-Grip Rotary Hose Couplings have been improved by the addition of drop forged steel clamps. Former malleable steel and cast steel clamps are satisfactory for certain work but the drop forged material answers all requirements universally. With the new clamps specially heat-treated bolts are used. The connectors used are of the special chromium steel which has proven very satisfactory.

Servicing Fixture

The improved servicing fixture is a new device for building up and grinding to size reamer and underreamer cutters. The nut and plate are removed and the cutters installed. The plate is then slid on with the key in its center opening sliding back in a groove to locate it. The nut is then screwed on to hold the cutters exactly as the nut holds them on the reamer or underreamer. The straight edge is held against the edges of the plates at both ends and is kept parallel to the axis of the mandrel. The cutter teeth are built up to slightly beyond and are ground down to exactly the height of the straight edge. Replaceable plates adapt the fixture to all sizes of reaming and underreaming cutters.

Pipe Coatings

McEverlast, Incorporated, in its indoor exhibit will show underground pipe of various types protected with hand and also machine application of various McEverlast hot and cold preservative coatings of different thicknesses, supplemented by wrappings of processed wrappers, for additional adequate film thicknesses, to protect against soil stresses, excessive moisture, alkali, sulphur and corrosive soil, destructive agencies; also illuminated sectional models of soil conditions obtained at various industrial and suburban territories; illuminated transparent enlarged pictures of pipe installations protected with McEverlast coatings; models of steel tanks protected with McEverlast "Luminite" coatings.

Also large diagram picture of the new "Somastic" applying and wrapping machines for a very heavy insulating coating. This is the latest and most progressive invention of an application and wrapping machine.

Boltless Hose Coupling

American Iron & Machine Works Company, Oklahoma City, will exhibit American releasing and circulating overshot, wall hook, milling shoe, automatic cathead, boltless hose coupling, adjustable steel rig brace, releasing and circulating spear, fish tail bit, water circulator for combustion engine, inside pipe cutter, cone fishing socket, drill pipe float valve.

The boltless hose coupling will be particularly featured. It is made of steel alloy and heat treated cast steel, and is easily installed, tightened or removed. The heat treated nozzle withstands high velocity pressure of sand laden drilling fluid. Wedge principle of application allows high compressibility of hose on nozzle, preventing leaks under extremely high pressures. Set screws retain wedges in place regardless of vibration and working conditions. It is made especially to meet the demands of high steam and water pressure required by improved drilling equipment.

The American releasing and circulating overshot is an all-round fishing tool, which will recover the fish under most troublesome conditions. It will catch drill pipe, coupling or tool joint, and can be released from any point. The wall hook is a one-piece forging with no welds and is manufactured in eight-, 15- and 24-foot lengths. The milling shoe is made with heat treated cutting teeth on inside and bottom for use in milling off and shaping up "fish" so that it will enter bowl of overshot.

The American automatic cathead has all strain equally distributed. All moveable parts are housed and mounted on cathead spool which can be bored to fit any size line shaft from 7½ inches down. Clutches have four-point contact and two-point disengagement, and also have 12 square inches of clutching face when engaged. Cathead has 36-inch stroke and can be engaged on quarter revolution. It is thoroughly greased from one point by Alemite.

The American drill pipe float valve is a safety device for deep rotary drilling. It not only acts as a float for drill pipe when going in the hole but in case the string is dropped or parted the float will break the fall. The American fish tail bit is especially effective in drilling gumbo or soft formation. The water courses extend through the entire body of the bit with the outlet on the blade just above the cutting edge, which prevents the bit from balling up and will cut spudding down to a minimum.

NEW EQUIPMENT FEATURED AT CALIFORNIA EXPOSITION

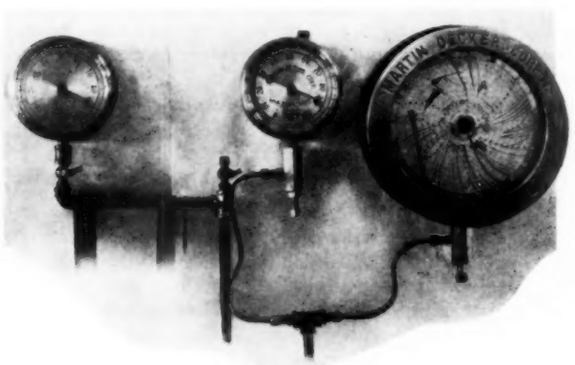
Adjustable Pulsation Dampener

Martin-Decker Corporation, 3431-45 Cherry Avenue, Long Beach, California, will stress in its exhibit the newest addition to its line, the "Utility" model Adjustable Pulsation Dampener. That device will be shown as applied to a pressure gauge and to a recorder. These instruments will be connected to a single cylinder compressor and alongside will be mounted a gauge unprotected by the dampener.

The Adjustable Pulsation Dampener is made in that "Utility" model for refinery and pump line gauges, manometers, compressors, gauges, orifice meters, and so forth, and in the "heavy duty" type for mud pump gauges and similar service. Both models will be exhibited.

Having proved the success of the principle involved under the most severe conditions possible, the Martin-Decker Corporation has designed the Adjustable Pulsation Dampener used on its mud pump gauge in a "utility" model adapted for throttling the pulsations of compressors and pumps of all types. Due to its adjustable feature this device may be used either for a few inches of water or for 2000-pound gauge pressure. While damping out all vibration, there is no appreciable time lag. It is immediately sensitive to either large or small changes in pressure, and the gauge always indicates the true mean pressure. It is easily cleaned without disturbing the connections.

The accompanying photograph shows a gauge and recorder each fitted with this device connected in parallel with an unprotected gauge (at left) on a compressor line.



Foxboro Stabilizer

The Foxboro Company, Foxboro, Massachusetts, makers of controlling, recording, and indicating instruments, will feature the Stabilizer in the premiere showing. It is the company's latest development in the field of automatic control.

The Stabilizer is an automatic controller that has complete command of the controlling medium. It was designed to meet the need for an instrument that would successfully solve such control problems as: tops of towers, pipe stills, reboilers and scores of other industrial processes involving temperature, pressure or flow.

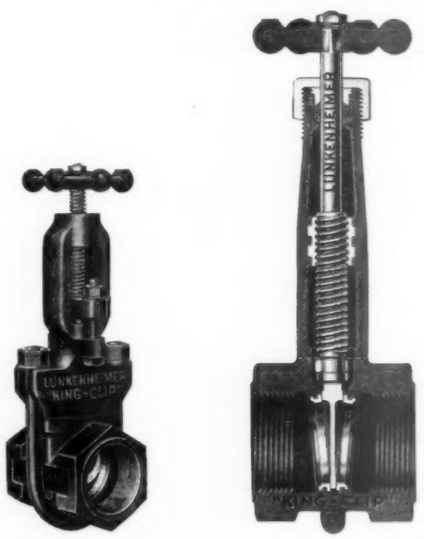
This instrument is particularly applicable to any control problem involving a complicated process lag as it has a type of throttling range that prevents "hunting" or over-controlling. Its outstanding characteristic, however, is an automatic stabilizing feature that prevents the effect of throttling range from changing the control point.

In addition to the Stabilizer, the Foxboro Company will show a new Damping U-Tube, new Steel Helical Tube Recording Gauges, and the new Refinery Indicating Gauge with alloy-steel parts.

Valves

The Lunkenheimer Company, Cincinnati, Ohio, will exhibit a complete line of bronze, iron body bronze mounted, all-iron and steel valves, including several sectioned samples, also grease cups, oil cups and lubricators. Of special interest will be the display of steel gate valves.

The Lunkenheimer exhibit will include the various types



of the "King-clip" Gate Valve. This valve, which was introduced to the market last year has proved very popular in the petroleum industry as a general service valve in the handling of oil, gas, gasoline, air, water and steam. It is made in three types—inside screw, outside screw and yoke and quick operating in sizes one-fourth-inch to four-inch. Screw end patterns, sizes one-fourth-inch to two-inch are rated at 150 pounds W. S. P.—225 pounds gas—liquid pressure; screw end 2½-inch to four-inch, flange end 1½-inch to four-inch are rated at 125 pounds W. S. P.—175 pounds G. L. P. All types are procurable in both the iron body bronze mounted and all iron patterns.

The construction of the "King-clip" Gate Valve is exceptionally rugged and the design is unique. All internal parts including the bonnet bushing are made of bronze, making it virtually a bronze valve encased in iron. The iron casing adds rigidity while the complete bronze trimmings offer all the advantages of a non-corrodible and better wearing material for these parts. Another feature of interest to the petroleum industry is the deep thread area in the body which will accommodate either A. P. I. line pipe or merchant pipe without alteration.

The latest addition to this line is the "Causul" Metal "King-clip." It is made from the outside screw and yoke patterns and while developed primarily for use in handling caustic and sulphuric acid it had also proved successful in handling other corrosive materials. It is being recommended for sludge acid in refineries.

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Pitman
Rod Spiders
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Drill Pipe Spiders
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Slush Pump Valves
Slush Pump Pistons
Rotary Hose Clamps

THE facilities of both the above companies combined into one organization enable us to offer the petroleum industry a larger line of improved products, and to render a broader, more efficient service.

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Vice-President and Director of Sales

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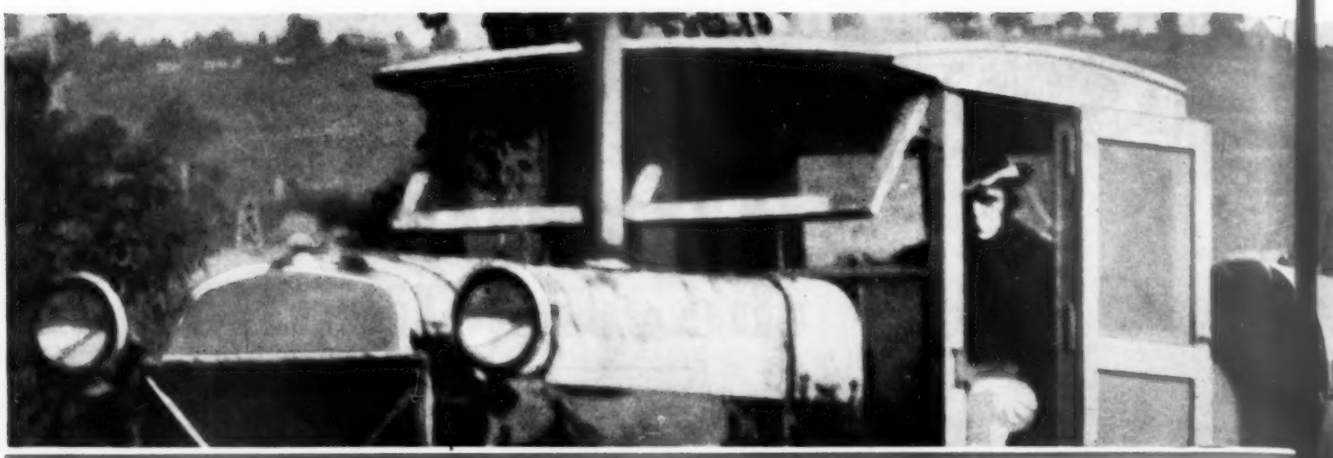
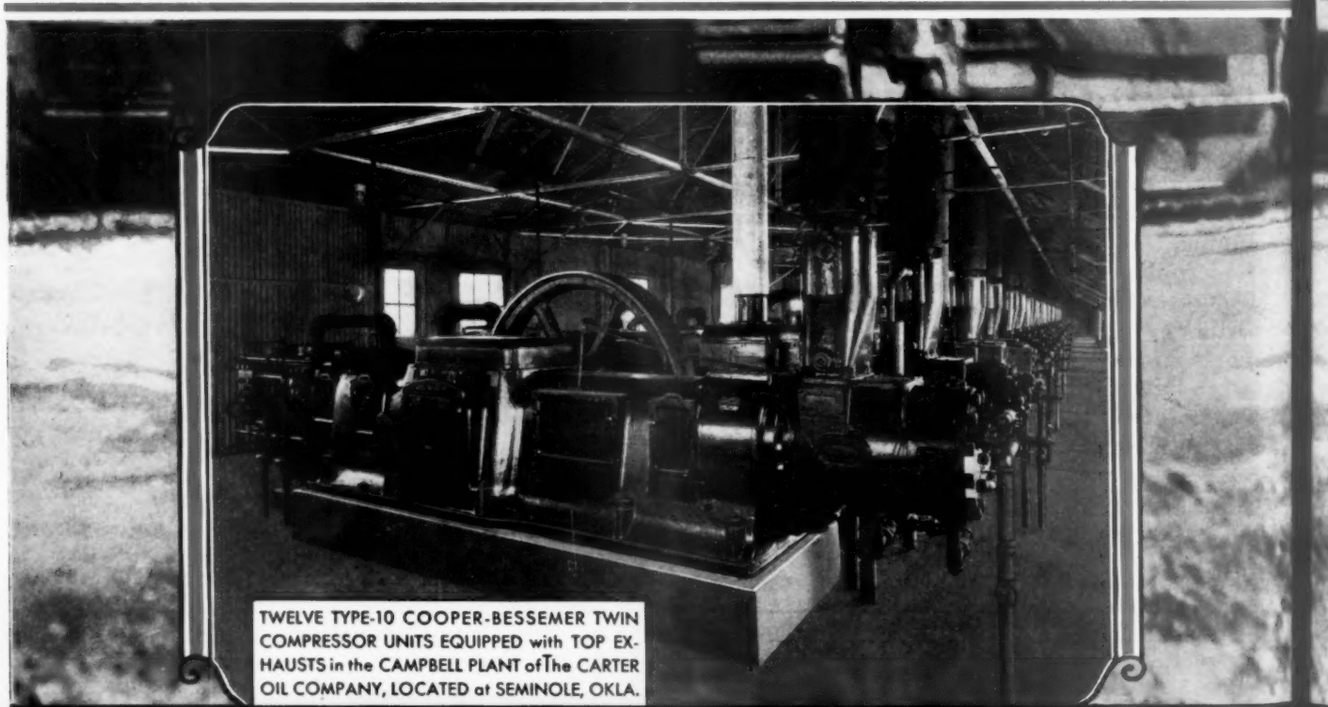
A copy of our new catalog of "Calmec" Products will be mailed on request.



MORE TYPE-10's GOING INTO THE LINE



TWELVE TYPE-10 COOPER-BESSEMER TWIN COMPRESSOR UNITS EQUIPPED with TOP EXHAUSTS in the CAMPBELL PLANT of The CARTER OIL COMPANY, LOCATED at SEMINOLE, OKLA.

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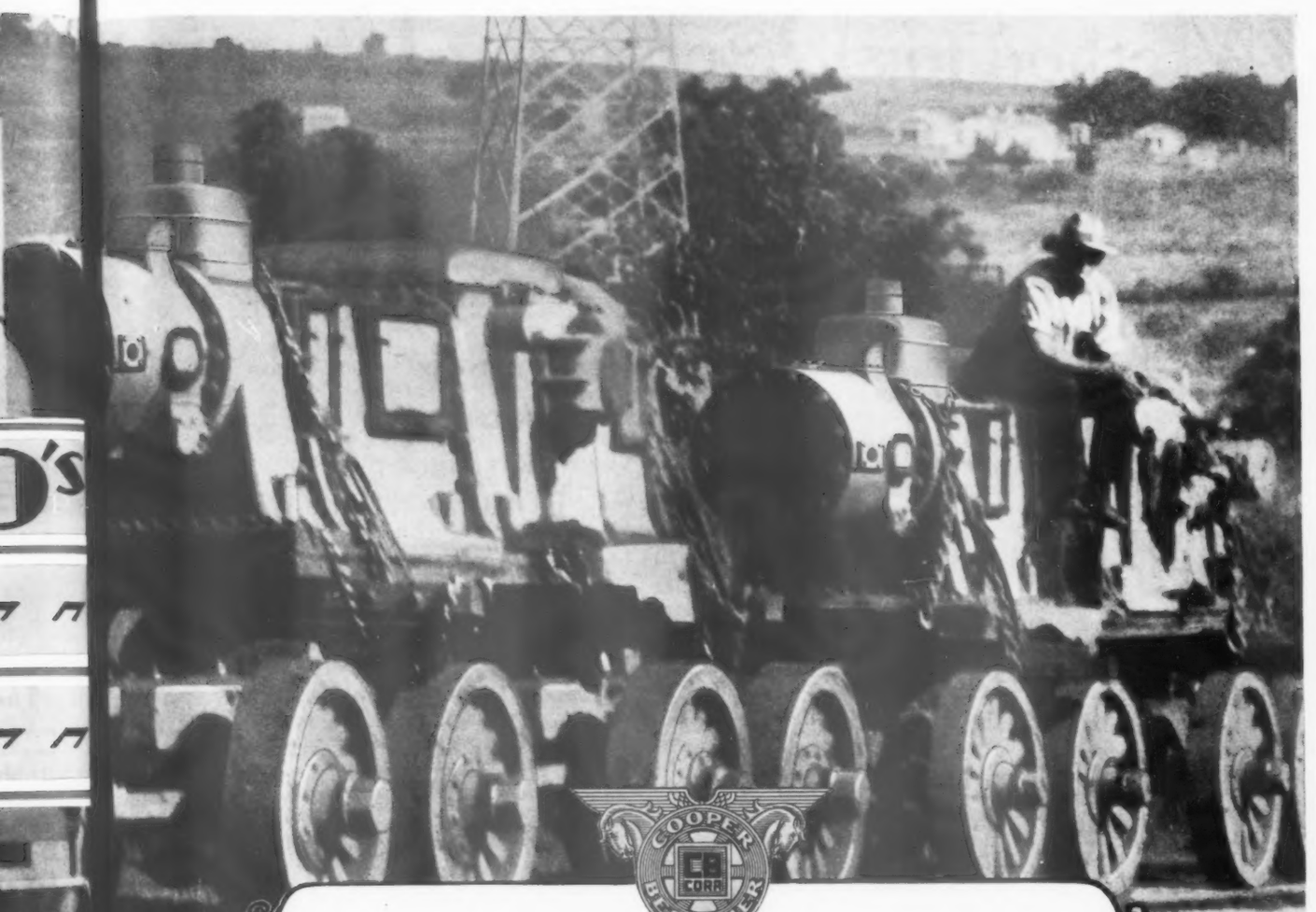

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Method for Determining Effective Porosity of a Reservoir Rock

By KENNETH B. BARNES*
Petroleum Research Assistant, Pennsylvania State College

THE determination of the porosity of a petroleum reservoir rock is an all-important factor to every oil producer, for the porosity is one of the major considerations in appraisals of oil lands, in an estimate of future and ultimate oil recovery, and is useful information for a preliminary survey as to the profitableness of secondary recovery. Its usefulness in the latter case is very great inasmuch as it is absolutely necessary to know as accurately as possible the average porosity of the oil sand before an estimate can be made of the size, type, and amount of equipment necessary to inaugurate an efficient repressuring system. The same factor applies equally well to the water flooding method of recovery as practiced in the Bradford, Pennsylvania, district. In determining the suitability of either a barren or depleted oil structure for the storing of surplus manufactured gas, natural gas, or a mixture of the two for use in handling peak loads or for later consumption, the porosity of the sand is again a major consideration. Oscar E. Meinzer[1] lists six methods for the determination of porosity, and there are possibly other methods not listed. The method in the most general use at the present time, however, is based on a comparison of the volume of a sample of the sand and the aggregate volume of the sand particles of which it is composed. This method is generally carried out with the Russell apparatus,[2] which is a glass device used for measuring the two volumes, a mortar and pestle used for reducing the sand to grain size, and a saturating liquid, usually acetylene tetrachloride.

K. B. BARNES

In carrying on research projects in the laboratory of the Petroleum Production and Natural Gas Research Department of the Pennsylvania State College, which involved the porosity determination of over 400 samples of sandstone, a method that is believed to be somewhat different from previous methods was developed. Credit should be given to Professor Clark F. Barb of this department who suggested the method. It seems best to give first a description of the method, as any advantages may be more easily recognized in the later discussion.

The apparatus used in this method consists of the following items:

1 Russell porosity apparatus
1 Laboratory balance reading to .1 milligram. (The Chainomatic is a very good type, as it is fast and acurate.)
1 Cenco Hyvac vacuum pump with manometer, rubber hose, glass flask (filter flask) and stop cock.
1 heating device, either electric oven or hot plate.
1 flask or tin receptacle suitable for boiling.
2 400 c.c. beakers.
1 quart of acetylene tetrachloride ($CHCl_2$-$CHCl_2$, also called tetrachloroethane). The technical grade is satisfactory for these tests.
1 quart carbon tetrachloride (CCl_4) or other organic solvent. Miscellaneous items: tweezers, stop cock grease (bees wax), filter paper. Gloves are desirable for extreme accuracy.

Procedure

The tests should be run in a room where constant temperature is maintained and as low humidity as possible exists. The samples to be tested are first cut down to a size approximately two cm. by three cm. so that they can easily enter the removable stopper end of the Russell apparatus. They are then boiled in carbon tetrachloride (b. p. 169°F.) for a period of one to three hours. The extent of boiling depends on the amount of oil film, paraffin, and residuum which remains in the sand which it is necessary to remove. A clean sand requires little boiling, whereas considerable time is necessary to completely clean sand well saturated with heavy oil. Either carbon disulfide or ether can be used in the place of carbon tetrachloride as the cleaning solvent, and they work more efficiently, but both of the former are highly inflammable, while carbon tetrachloride is not. The apparatus used for boiling the samples is an ordinary one-gallon tin can, insulated on the outside with asbestos sheeting and closed with a vapor tight lid. A one-half by three-eighths-inch pipe reducing bushing is soldered in the center of the lid to allow for the vapor outlet to a reflux condenser in which the solvent is condensed and runs back over the cores. If a large number of samples are run, and the solvent becomes contaminated, it should be replaced by fresh solvent. The contaminated liquid can be cleaned up by distillation and used again. A Soxhlet extractor was first used in place of this arrangement, but the boiler proved simpler and faster and just as effective or even more so, in operation.

The samples, after boiling, are allowed to drain in order to remove as much of the solvent as possible by gravity. They are then placed in an electric oven or on a hot plate (if a hot plate is used, the samples must be insulated from the steel by a piece of asbestos sheeting) and allowed to heat uniformly for a period of one hour at a temperature of

*Published with the permission of the Dean of the School of Mineral Industries, Pennsylvania State College.

[1]U. S. G. S. Water Supply Paper No. 489, 1923, p. 11.

[2]Russell, W. L., "A Quick Method for Determining Porosity." Bulletin A. A. P. G., October, 1926.

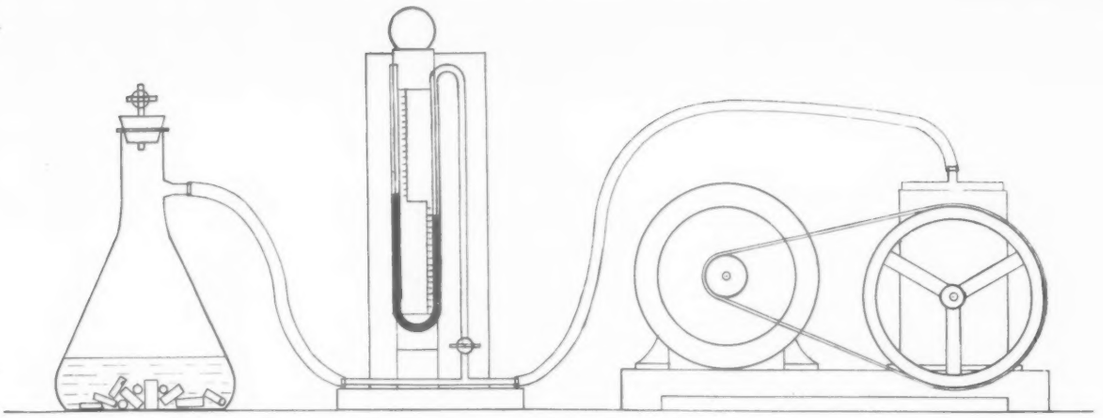


FIGURE 1
Diagramatic sketch of apparatus for saturating samples with acetylene tetrachloride

215°F. It seems quite essential that during this period of heating the temperature of the samples does not go higher than 215°F. Any further increase in temperature may cause incipient dehydration of one or more of the constituent minerals which make up the sandstone. Thus, by applying too much heat, part of the water that is chemically contained in the mineral may be driven out and evaporated. Failure to observe this precaution concerning temperature may result in a porosity appreciably higher than that of the rock in place, and if the samples are not heated to at least 212°F. (although the carbon tetrachloride will be removed at 169°F.), any moisture contained physically in the pore space will not be driven out.

Examination of Samples

After drying, the samples should be carefully examined and all small projections or loose grains broken off. Also, any part of the sample that seems friable should be broken off at this stage, for if it breaks off later the test will be ruined. Likewise, any samples that show cracks or crevices should be broken in a manner to eliminate them, or else the samples should be discarded.

The samples are now ready to be weighed in the dry state, and henceforth should be handled only with the tweezers. If there is a large number of samples to be weighed, all should be placed in a desiccator immediately after removing from the oven. This prevents the samples from absorbing moisture from the air which may result in appreciable additional weight. Each sample is then weighed in the dry state and its weight recorded. The balances used, read to .1 milligram, but reading to one milligram is sufficiently accurate for most work.

After weighing, the samples are carefully immersed in the acetylene tetrachloride contained in the suction flask, Figure 1, which is closed by a rubber stopper through which a glass stop-cock is inserted. The flask is connected through a sealed mercury manometer to the suction of the vacuum pump. Heavy walled vacuum tubing must be used for these connections.

The pump is started and the pressure reduced in the

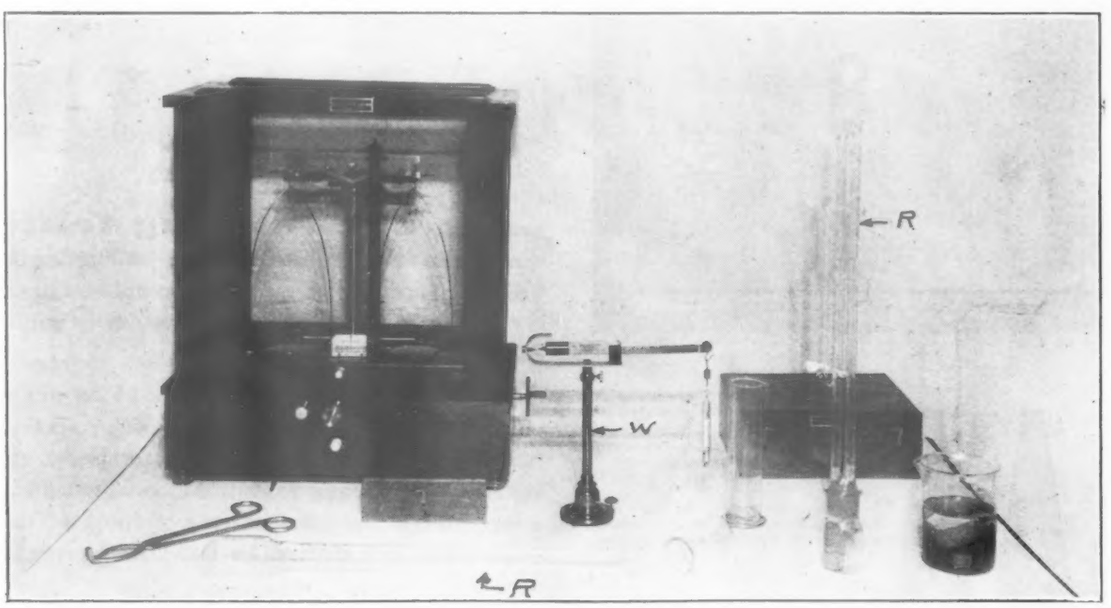
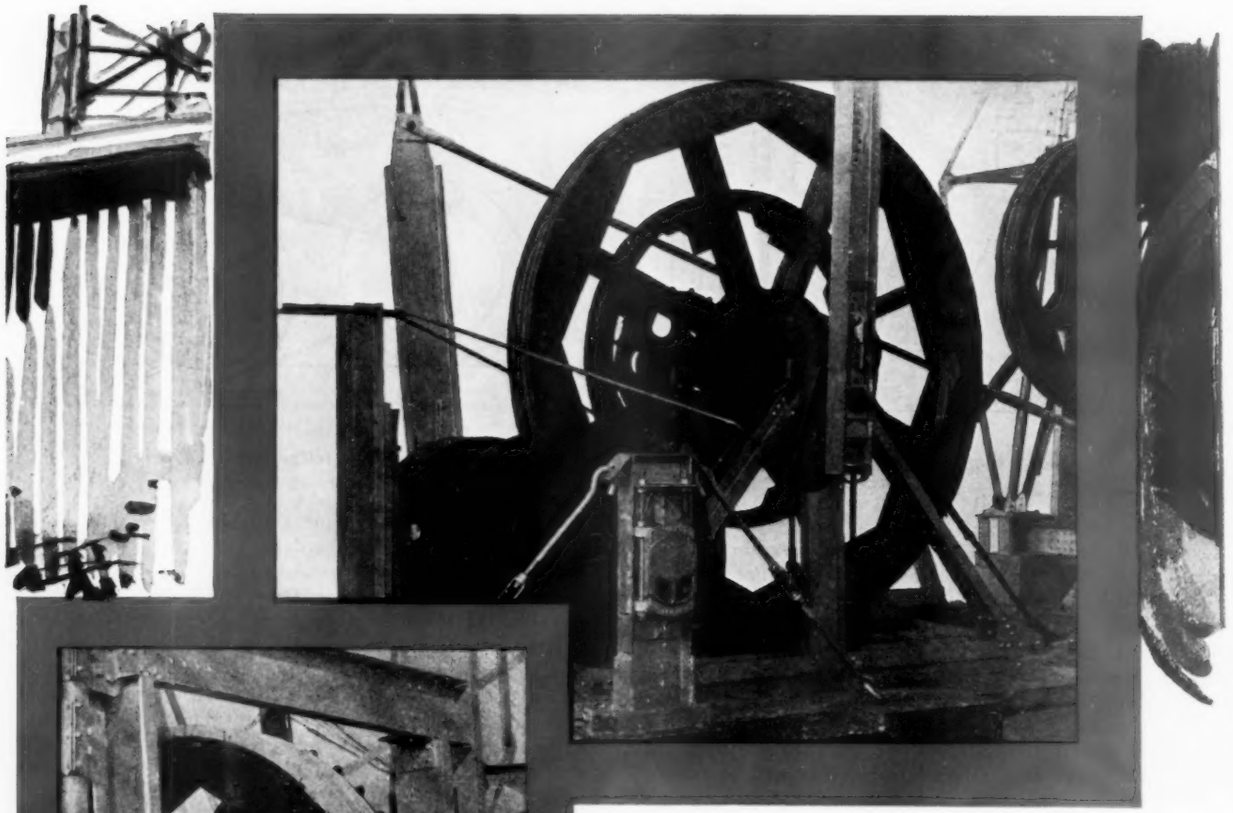
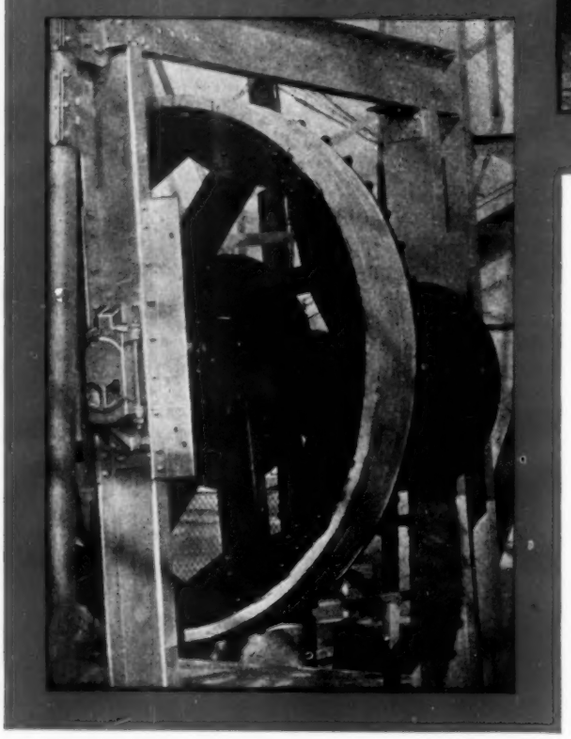


FIGURE 2
Equipment used for determining the weight and volume of porosity samples, and for determining the specific gravity of the saturating liquid. R indicates the Russell apparatus for determining volumes. W indicates the Westphal balance for determining the specific gravity of liquids. (A hydrometer may be used instead)





Upper illustration shows the Moore self-aligning pitman bearing in position on the wrist pin, also the self-aligning tail post bearing on the friction sand reel, assuring free, smooth running.

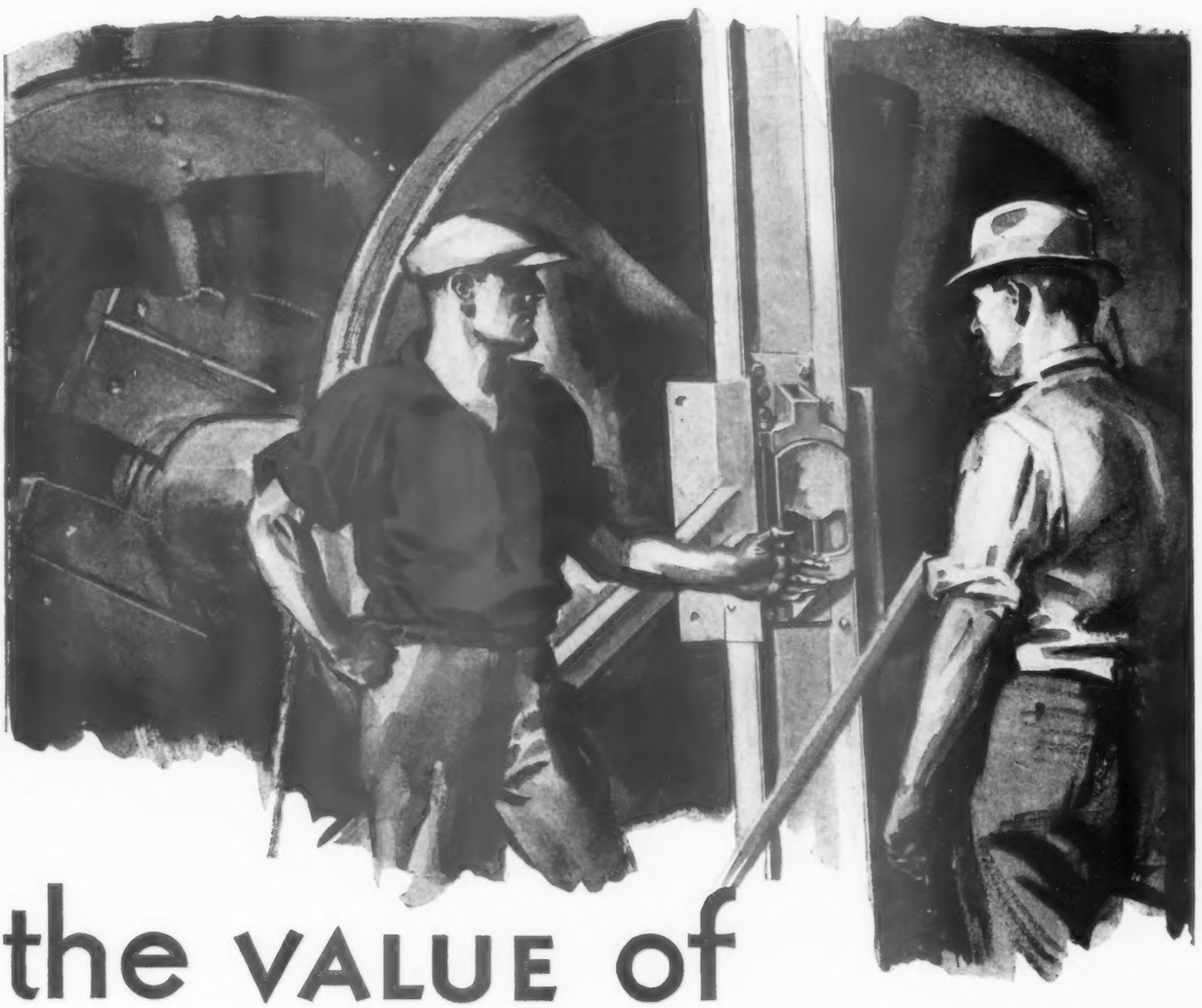
Lower illustration shows the Moore calf wheel post self-aligning bearing, showing oil reservoir on top for easy lubrication.

You'll see

An outstanding feature of Moore equipment is the Moore self-aligning bearing. Unusual and unexpected drilling conditions have made it highly important to develop a device so flexible, efficient and fool-proof.

Moore bull and calf wheel posts, the Moore pitman, the tail post and swing lever for the Moore friction sand reel—vital points that are subject to unusual stress or strain—all are equipped with Moore self-aligning bearings. Slight irregularities in a gudgeon or shaft, or deflections in a shaft under heavy load, often prevent

Moore BULL and



the VALUE of SELF-ALIGNING BEARINGS

a wheel from turning on its true axis. Ordinarily, the result is increased friction, unnecessary wear on the bearings, frequent rebabbitting and, of course, decreased operating efficiency.

In Moore bull and calf wheel posts, the bearing is free to adjust itself to the wheel gudgeon, permitting the wheel to turn freely. This automatic adjustment, together with the new effective means of lubrication provided, assures an even, free bearing surface at all times. The result is less friction, less rebabbitting and a bearing surface that lasts indefinitely. For extra heavy work, bearings can be furnished with cast white brass linings or bronze bushings.

The development and use of self-aligning bearings is one of many important reasons why Moore equipment is preferred.

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CALF WHEEL POSTS

flask containing in the samples. Air bubbles violently from the samples for the first few minutes, but the bubbling diminishes gradually until only an occasional bubble appears. The vacuum should be continued for about 10 minutes after the bubbling ceases. This evacuation process consumes anywhere from 30 minutes to five hours, depending on the nature of the sample. As low a pressure as possible is desirable. About four millimeters of mercury, absolute pressure, is satisfactory, and is fairly easy to obtain if the pump is in good condition.

Air is now admitted to the flask (first closing off the manometer), and the samples are allowed to set in the liquid for 20 minutes, during which time the atmospheric pressure drives the liquid into the evacuated pores. After this they are very carefully transferred to a beaker, also containing sufficient acetylene tetrachloride to completely cover them. They are now ready to be weighed "wet." A sample is taken from the beaker and the liquid adhering to its surface removed. This can best be done by holding the samples with the tweezers in such a position that the surplus liquid drains to a corner. The drop is removed with a piece of filter paper. This operation must be carefully executed, for if part of the liquid in the pores is allowed to escape, the volume reading will be lower than the true reading and, conversely, excess liquid clinging to the samples will cause a higher volume reading than the true one. The wet sample is now placed on the balances and quickly weighed. The estimated weights should have already been placed on the tray of the balances to speed up the weighing. It will be noticed that the balance pointer will center momentarily, and then the balance will be lost. This is due, of course, to the evaporation of liquid from the surface of the sample. The rate of travel of the balance pointer from dead center to the off-balance position should be carefully noted, and in subsequent weighing this rate should be duplicated as nearly as possible.

The sample is now placed back in the liquid for a moment and the weighing procedure repeated in order to obtain a check. Both the process of removing the excess liquid from the sample and the correct weighing procedure can be mastered with a little practice, and thereafter can be quickly and accurately done. A sample that can not be weighed immediately due to a misjudgment of the approximate weight by the operator should be rewet before attempting to weigh it again. Each sample, after it has been satisfactorily weighed, is replaced in the beaker of acetylene tetrachloride.

The volume of the sample is now determined by means of the Russell apparatus (Figure 2). The stopper end of the device is removed and the apparatus filled with acetylene tetrachloride until the liquid rises an inch or two into the glass tubes. The ground glass joint of the stopper is slightly coated with stopcock grease and the stopper replaced. The apparatus is then returned to its upright position and allowed to drain until the liquid level in the tubes remains constant. This draining period takes approximately 10 minutes. The reading of the liquid level on the scale is now taken and recorded as the zero reading. The apparatus is again inverted and the stopper removed. A sample is taken from the beaker and, after removing all the surplus liquid as in the wet weighing, is inserted in the stopper. The apparatus is held at an angle of about 20 degrees from the horizontal while replacing the stopper, in order to prevent the sample from falling out. The joint is fitted tightly together and the apparatus righted and allowed to drain as in taking the zero reading. A reading is then taken and recorded as the volume reading. From this reading the zero reading is subtracted, the difference being the true volume reading for one tube. Since there are two tubes, this figure is multiplied by two in order to obtain the volume of the sample. Care must be taken that, before making a reading, no air remains around the rim of the stopper. These bubbles, if present, can easily be removed by rotating the apparatus while holding it at an angle. The bubbles rise in the tubes and break at the top of the liquid columns.

Determine Gravity

If the specific gravity of the acetylene tetrachloride is not known at the prevailing room temperature, it may be determined by means of a Westphal balance (Figure 2). This determination is very simple. The balance should be adjusted to read zero with the hydrometer hanging in the air before starting a specific gravity test. The glass container is now filled nearly to the top with the acetylene tetrachloride, and the glass hydrometer dropped in. The wire on the end of the balance is fastened to the end of the lever arm of the balance and the weights provided are added to the lever arm until the pointer balances at the zero mark. The specific gravity may be read directly from the size and position of the weights on the lever arm and, since the balance gives the specific gravity of the liquid at the temperature at which it is run, there is no correction for temperature necessary provided the "wet" weighing of the samples has been carried out at the same temperature. In making the determination, care should be taken not to allow the hydrometer to touch the sides of the glass container. In the CGS system density and specific gravity are identical and in later calculations are so used.

The calculation for porosity can now be made. The difference between the wet and dry weights of the sample is the weight in grams of the acetylene tetrachloride that filled all connected interstices in the sample. This weight in grams divided by the density of the liquid gives its volume in cubic centimeters, and is identical with the volume of the connected voids present in the sample tested. The volume of voids divided by the volume of the sample gives the fraction of void space present and, when multiplied by 100, gives the value of the porosity in per cent. Expressed as a formula, the complete calculation is:

$$\frac{\text{Weight in grams of Saturated sample} - \text{Weight in grams of dry sample}}{\text{Density of acetylene tetrachloride}} = \text{Volume of voids in cubic centimeters}$$

$$\frac{\text{Volume of voids in cubic centimeters}}{\text{Volume of Sample in cubic centimeters}} \times 100 = \text{Percentage porosity of the sample}$$

A sample calculation of the porosity of a specimen from data as determined by this method is given below:

Field: Bradford
Operator: A
County: McKean
State: Pennsylvania
Well Number: 100
Sand: Bradford
Depth in sand: 3′ 6″

Date of run: October 31, 1930.
Temperature: 70°F.
Remarks: A sandstone of fine, uniform grain, cemented for the most part with secondary silica and some micaceous products. During the process of lithification the original outline of the quartz grains is obscured through deposition of secondary silica, resulting in an interlocking of the quartz grains known as mosaic texture.

Boiled in carbon tetrachloride: 90 minutes.
Dried: Electric oven: 60 minutes at 215°F.

Weight saturated:	14.882 g.	Vol. reading:	4.83 cc.
Weight dry:	13.616 g.	Zero reading:	1.87 cc.
	1.266		2.96

Draining time for each reading: 10 minutes.
Specific gravity of acetylene tetrachloride: 1.602 at 70°F.

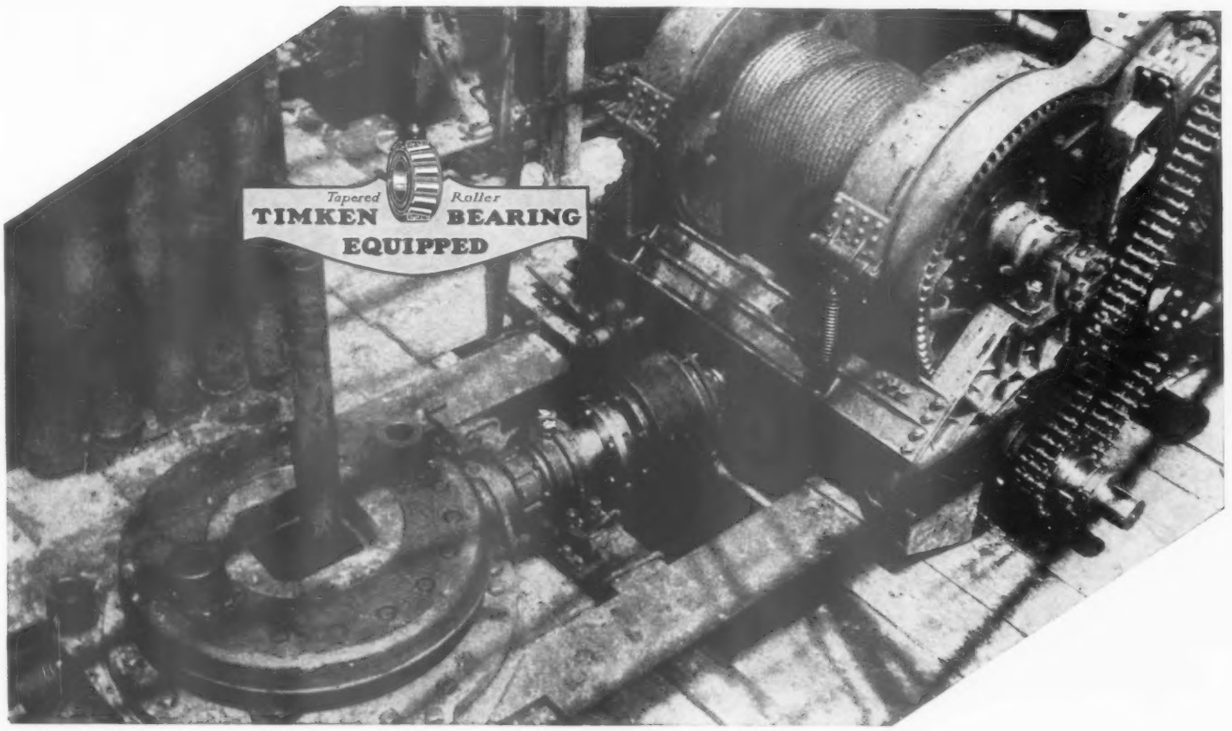
Calculations:

$$\text{Pore space} = \frac{1.266}{1.602} = .7903 \text{ cc}$$

$$2.96 \times 2 = 5.92 \text{ cc} = \text{volume of sample}$$

$$\text{Per cent porosity} = \frac{.7903}{5.92} \times 100 = 13.35$$

An idea of the accuracy of the method can perhaps best be



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obtained by an analysis of the major sources of error. Errors of appreciable amount that can be made are as follows:

(1) *Error due to air remaining in the saturated sample.* Before the dry sample is placed in the flask to be saturated with acetylene tetrachloride the pores are filled with air. After immersion, the air contained in the sample rises to the surface, due to buoyancy. However, a small part of the air may be trapped by overlying particles, so as to prevent its upward rise.

When the pressure is reduced from atmospheric to, say five millimeters of mercury, the trapped air expands and all is allowed to escape but approximately 5/100 (In this example the barometric pressure = 700 mm.), or 1/140, i.e., the ratio of pressures. To begin with, the trapped air is only a very small percentage of the original air trapped in the voids, and by application of reduced pressure and the consequent expansion the air finally trapped is only 1/140 of this small fraction. This fraction will vary with the atmospheric pressure and the amount of vacuum applied, but the error has, nevertheless, been reduced to a point where it is negligible.

(2) *Errors in estimating the surface of the specimen.* This error, caused either by allowing too much liquid to remain on the saturated sample, or by taking away part of the liquid held in the pores on or near the surface, will be the cause of most differences in results. It is an operation that depends on the skill of the operator and, as said before, takes practice and careful attention. Results will check closely, however, if the necessary precautions are always taken.

(3) *Errors in weighing the saturated sample.* The balance pointer will show a slow uniform movement to off-balance after registering momentarily a position of dead center. This movement is the same for samples of approximately the same size. It is caused by evaporation of the liquid from the surface of the specimen, and if unduly fast or unduly slow is an indication that the sample has not been correctly weighed and, therefore, it should be rewet and weighed again. This evaporation causes a variation in weight noticeable in the fourth decimal place. A variation of a few tenths milligrams will result in a change in the third decimal place in the percentage porosity.

(4) *Errors due to change in temperature.* If the temperature changes between the zero reading and the volume reading of the Russell apparatus, there is a change in volume of about 0.002 cubic inches (.03278 cc.) per °F. It is not difficult, however, to maintain the room temperature constant between the two readings. If gloves are used in handling the Russell apparatus, no error is caused by the heat of the operator's hands.

Effective Porosity

The effective porosity of a reservoir rock is defined as the volume of connected pore spaces in the rock per unit volume of rock. Absolute porosity takes into consideration not only these connected interstices, but also voids that are isolated entirely and those that are open at only one end, and therefore, cannot be readily entered by fluids. In any method of determining porosity where a comparison of the volume of the sample is made to the aggregate volume of the sand particles, the absolute porosity is determined, because all the voids, regardless of classification, are measured. In the method described above, the porosity is measured by the amount of liquid necessary to saturate the sand and, since the liquid can enter only the connected pore spaces, by definition this is a measure of the effective porosity. These connected pore spaces are the ones that contain the oil available under present methods of production.

A test of the same sample of a reservoir rock, first for the effective porosity, and then for the absolute porosity, will show that the absolute porosity is generally greater than the effective porosity, in some cases the two may be equal, but the effective porosity will never exceed the absolute. The variation depends on the character of the rock. This difference will probably reach a maximum in porous limestones where secondary deposition of calcite has closed off many of the pore spaces in such a manner as to completely isolate other openings. In the Petroleum and Natural Gas Research laboratory of the Pennsylvania State College about 50 samples were run, first by this method, and then by the volume-aggregate-particle comparison method, in order to get some idea of the magnitude of the difference between the effective porosity and the absolute porosity in various rocks. The majority of specimens showed that the absolute porosity was higher than the effective porosity. A few specimens showed differences within the limits of experimental error, or that the two porosities were practically equal. Figures on some of the samples run are given below:

Lab. No.	Rock	Location	Effective Porosity	Absolute Porosity
1A	Quartzite	New Jersey	2.69	2.88
2A	Quartzite	Eastern Pennsylvania	5.91	6.00
3A	Stockton ss.	Eastern Pennsylvania	7.55	7.93
4A	Stockton ss.	Eastern Pennsylvania	3.52	3.74
1B	Quartzite	Eastern Pennsylvania	4.82	4.86
2B	Quartzite	Central Pennsylvania	1.18	1.34
4B	Sandstone	Southwest New York	4.25	4.26
1C	Sandstone	Central Pennsylvania	7.23	7.75
2E	Quartzite	Eastern Pennsylvania	4.11	4.34
2F	Quartzite	Central Pennsylvania	3.62	3.84
34	Bradford ss.	Kane, Pennsylvania	14.4	16.4
36	Bradford ss.	Kane, Pennsylvania	13.6	17.4
39	Bradford ss.	Kane, Pennsylvania	10.2	13.0
44	Bradford ss.	Kane, Pennsylvania	13.9	14.1
81	Second Sand	Kane, Pennsylvania	12.3	13.0
47	Bradford ss.	Oil City, Pennsylvania	4.8	7.5
X-L	Second Sand	Oil City, Pennsylvania	17.4	17.7
X-2	Second Sand	Oil City, Pennsylvania	13.3	13.3
11	Bradford ss.	Bradford, Pennsylvania	12.10	13.37
12	Bradford ss.	Bradford, Pennsylvania	12.36	13.47

Grinding Loss Occurs

It should be kept in mind, however, that there is a grinding loss encountered in determining the absolute porosity that will result in a slight increase in the porosity over its true value. Due to this fact, the difference between the effective and the absolute porosity of the sample may therefore be slightly less than that difference as expressed by the above table. The loss seems to be greater for the rocks that are very porous, and for sandstones of very fine grain size. It is also difficult to reduce a very hard rock to grain size without a loss, due to the longer time required and the pressure necessary to break up the sample.

The use of acetylene tetrachloride has been fairly well standardized because of its penetrating nature and ability to be absorbed by the sand. It does not adhere to the glass of the apparatus, and therefore drains quickly; also, it has a low rate of evaporation. Kerosene has also been used in the place of acetylene tetrachloride with satisfactory results.

Conclusions

From a petroleum engineering standpoint, the advantages of this method are:

(1) It determines the effective porosity of the reservoir rock instead of the absolute porosity.

(2) The method will save time where a number of samples are to be tested. The samples are processed in a group in the phases of the procedure requiring the most time.

(3) It eliminates the error due to loss in grinding the sample to grain size, which has been estimated to average about .8 per cent.

(4) The samples, after testing, are in the same condition and shape as before, and can be saved for further examination or filing. In case of a detailed study of the sand this is a very important feature, for any permeability tests, photomicrographs, thin sections, etc., can be made from a sample on which the porosity determination was made.

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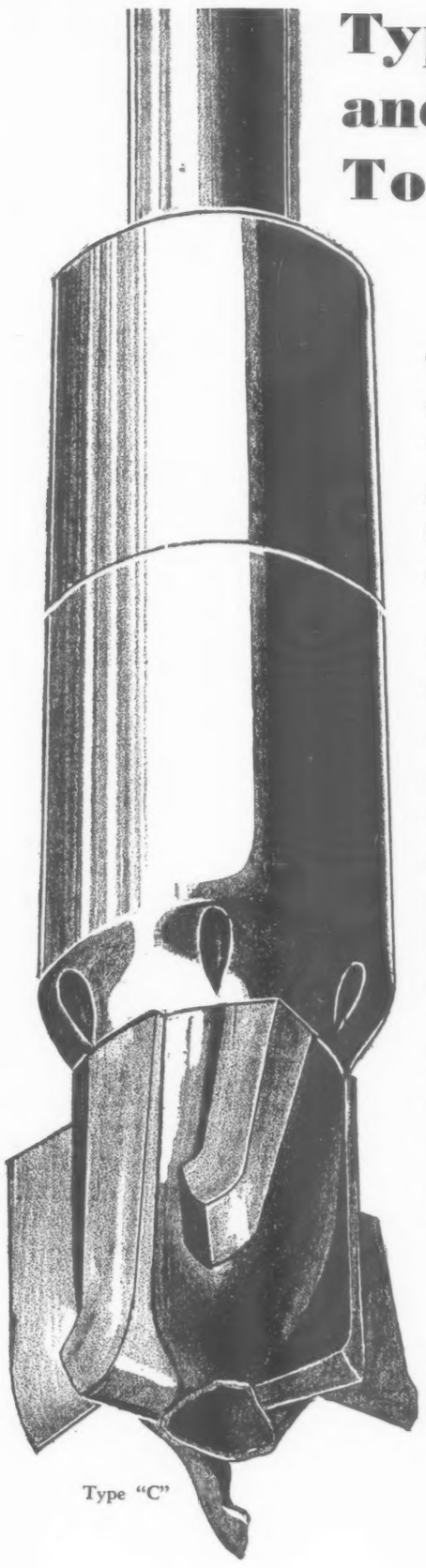

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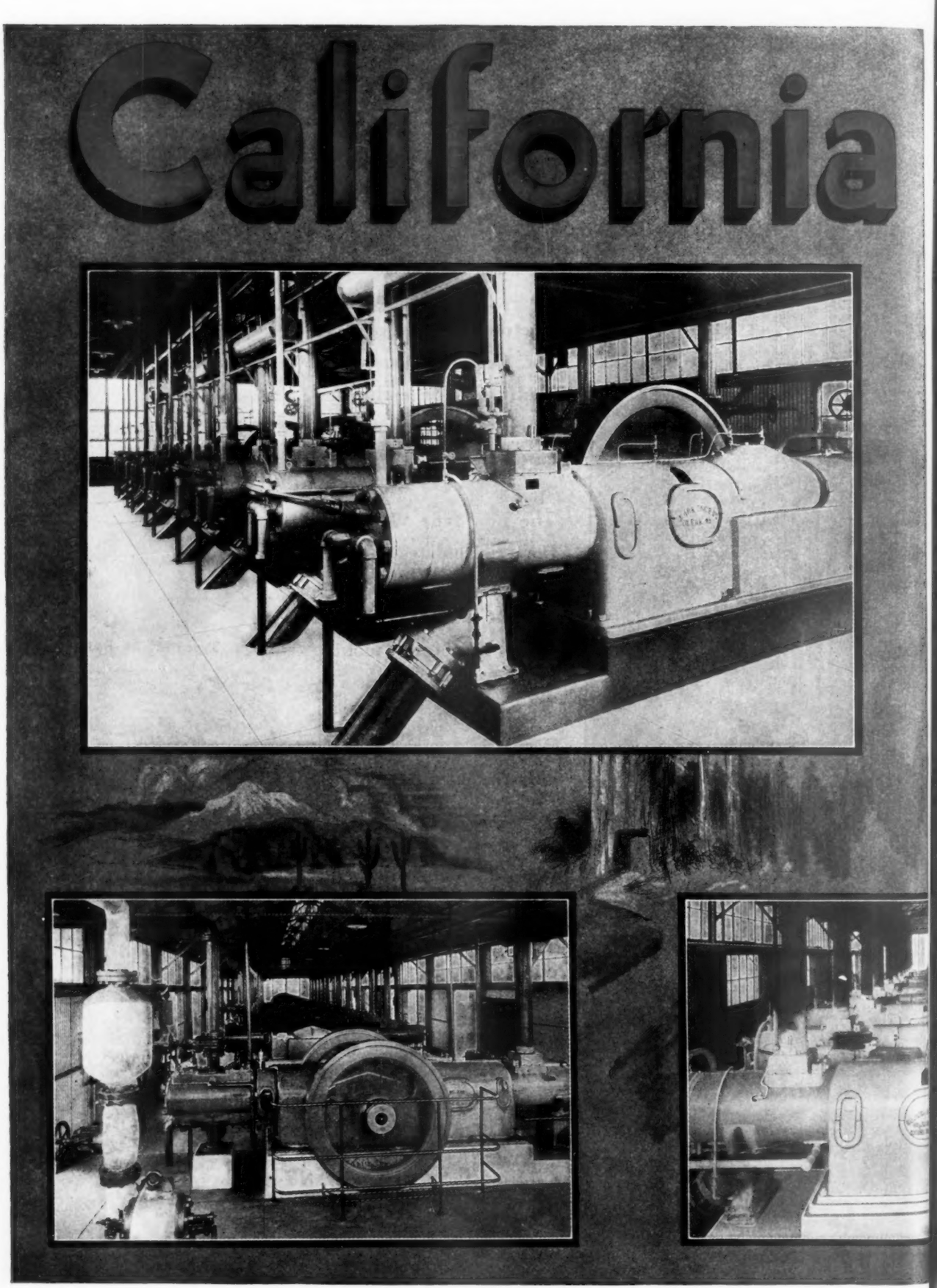
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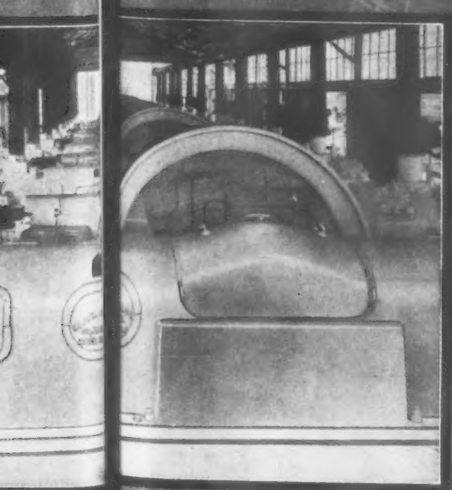

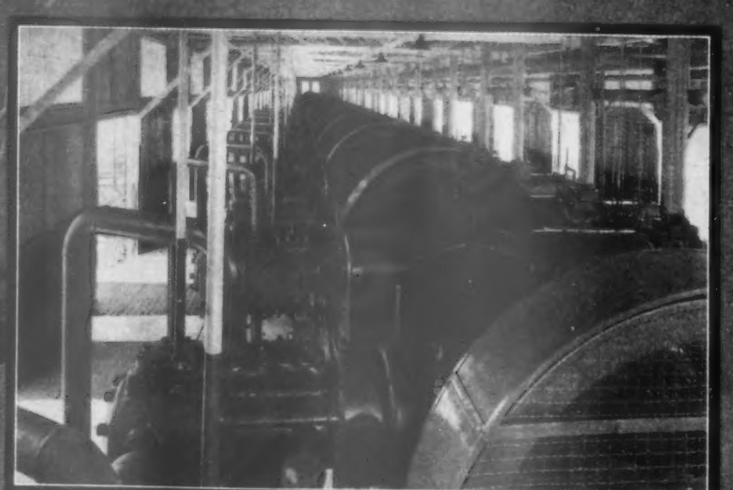

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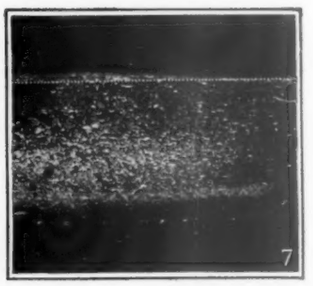
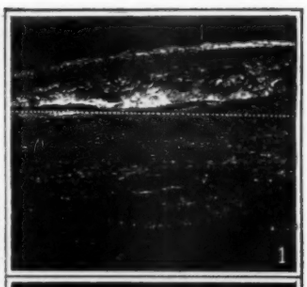
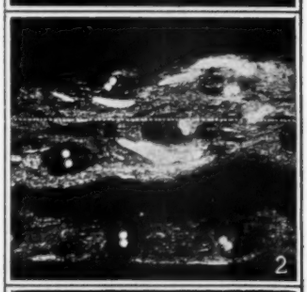
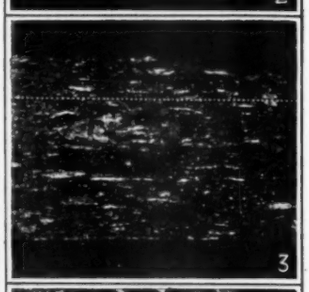
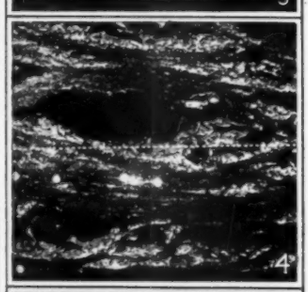


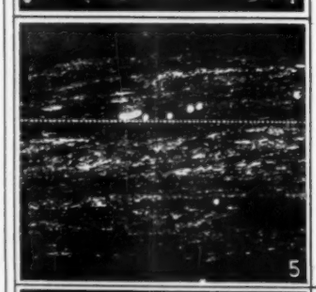
Cross-sectional photo of Multibestos LX

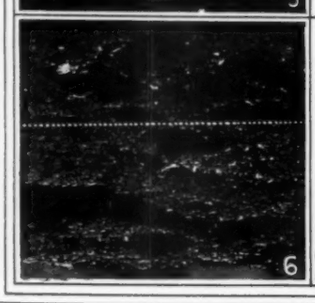












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The group of numbered samples of moulded brake linings shown in the panel at the bottom of the page was given the standard heat test (600° F. for three hours). Notice the difference in surface appearance. Sample No. 1 is Multibestos L X.

Then a cross-sectional photograph was taken of each with the same degree of magnification. These samples were all purchased in the open market and tested impartially under strict laboratory conditions. Note how some were swollen beyond the limits of the photograph. Distance between edge and dotted line shows original thickness of lining. The round white spots are wire, showing the presence of scrap material. The large craters show rupture of lining due to failure of binding material. The Multibestos sample shows perfect results—practically no swelling—perfect structure—no breakdown of the binding material.

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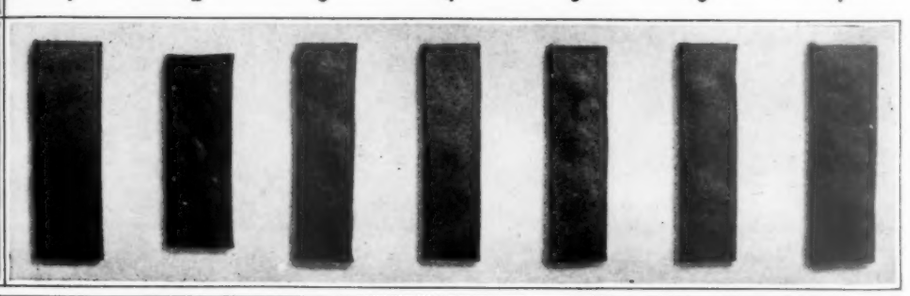


Wall Scraper Proves Aid
In Deepening Operations
At Refugio

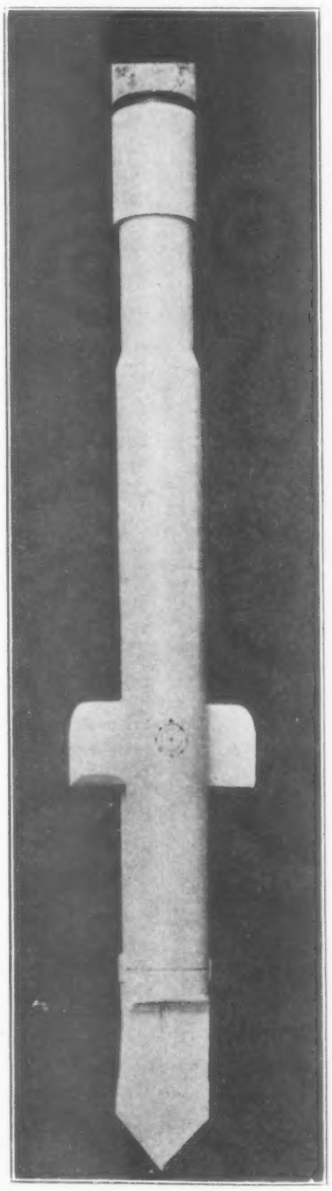
PRESENCE of several deep oil horizons and various gas sands in the Refugio field, Southern Texas, with consequent practicability of deepening wells successively to lower producing levels, together with other exceptional conditions, has resulted not only in use of heavy regular equipment but also in application of various special, advanced ideas and pieces of equipment.

In connection with the deepening of the wells and the handling of the gas sands, considerable application is being made at Refugio of a new tool, known as a "rotary hydraulic wall scraper," made by Quaker Oil Tools, Incorporated, Huntington Park, California. This device is in effect an underreamer, but it differs from the sual type in having capacity for exceptionally large expansion, making it a practical tool for various Refugio conditions.

Houston Oil Company, in Tom Heard 1, Block 16, Refugio townsite, for example, made use of the tool in setting relatively large size casing after deepening of the hole from the original production horizon. It had produced oil for approximately two years from the 5400-foot sand on the east side of the field, with seven-inch (outside diameter) casing cemented just above the sand. It was desired to deepen the well to the 6500-foot sand known to underlie that part of the field, and to set 5½-inch (outside diameter) casing for completion in the lower sand.

The 1000-foot interval below the seven-inch casing was drilled with a 6⅛-inch bit. But even though the collars on the 5½-inch casing were turned down to 5⅞-inch, the string would not go to the bottom. It was necessary, therefore, either to set 4¾-inch (outside diameter) casing or to ream the hole to a size that would permit landing of the 5½-inch string. The above mentioned hydraulic expansion wall scraper reamed the 1000 feet of 6⅛-inch hole to diameter of eight inches, and the 5½-inch string was landed and cemented without difficulty.

Illustrating another use to which the above tool is put, a well of United Production corporation had drilled through a gas sand to try for oil production in a deeper horizon. The oil sand proving a disappointment, however, it was decided to plug back with cement to the gas sand to complete the well as a commercial gas producer. After that job was finished, however, it was found that the well had been cemented back 14 feet too far, and that the gas sand had been cemented off.



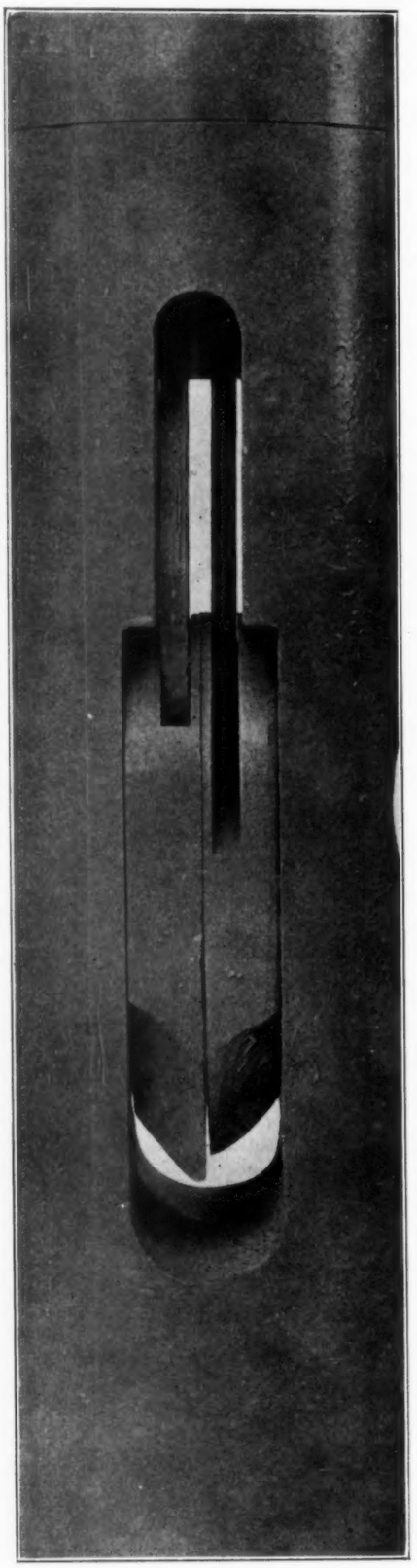
The wall Scraper shown with blades expanded into cutting position

The excess cement was, therefore, drilled with a 7¾-inch bit, and the wall scraper was run with a set of 11-inch blades, reaming the 14 feet of cement in one hour. Coming out of the hole then, the crew put on a set of 12½-inch blades and reamed the same 14-foot portion of the well with those larger blades so as to be sure that all the cement was off the gas sand. The well was then brought in as a large producer showing 1800 pounds pressure.

Another use to which the wall scraper has been put at Refugio is in helping to assure successful jobs in cementing casing, the hole being reamed to a larger diameter in the section to be occupied by the cement after setting of the casing. This reaming is done before casing is set, and it insures free passage of cement around the outside area of the casing, at least for the distance that has been reamed.

Other applications of the wall scraper in fields of the United States, including particularly wells in California as well as Refugio and others in the Texas-Louisiana Gulf Coast, include scraping and cleaning the oil sands which have been clogged from one cause or another, prolonging life of the well; starting of shoulders in straightening crooked holes; and other uses. For example, in a well at Signal Hill, California, on "the smallest lease in the world," previously referred to in THE OIL WEEKLY, January 30, 1931, page 61, the Magna Oil Company had 470 feet of 13½-inch below the nine-inch water string, and the 470-foot interval was filled with cement and mud caused by the drilling and cementing of the well, and it failed to produce when the 7⅞-inch bit was run to the bottom. The wall scraper successfully cleaned the hole to its original size, namely, 13½-inch, with the result that the company obtained a 2400-barrel well.

The wall scraper is made in various



Showing blades of Wall Scraper in closed position

sizes. The largest will run through nine-inch casing and will expand to 19 inches, and the other sizes will expand in proportion. The tool is about seven feet long, over all. The cutting blades are approximately six inches wide, and are made of chrome vanadium steel, which is suitably heat treated to obtain necessary degree of hardness for cutting any formation, and which will break before it will bend, assuring that the blades will not become bent while expanded and that there will be no difficulty in again closing them.

Operation of Wall Scraper

The rotary hydraulic expansion wall scraper is run into the hole with the blades in closed position, this being assured by a coiled plunger spring, which exerts only sufficient tension on the blades to prevent them from opening before circulation pressure is applied to the top of the plunger rod (piston end) in the tool. When the point is reached where scraping is to start, it may be necessary to increase the usual circulation pressure to enable the blades to cut their way up to a horizontal position while the string is being rotated. This gives a full gage hole at the point where the wall scraper is being rotated. After blades are fully extended and full gage of the hole is cut, the circulation pressure may be lowered to usual circulation pressure, as the blades tend to hold themselves to a horizontal position once the full gage of the hole is attained. After running the scraper to desired depth the blades will close automatically in coming out of the hole when the pump pressure is released. The plunger rod has circulation through its entire length, regardless of the position of the blades, thus preventing wet jobs.

This circulation through the plunger rod is beaned down by the one-half inch openings at the bottom of the rod, which builds up a back pressure. This back pressure is applied to the piston, which forces the plunger rod down and extends the blades out and up.

Thus in bringing the wall scraper out of the hole it is necessary to stop the circulation to allow the piston to rise in its cylinder as the blades close.

Details of Construction

Details of contruction of the Baker rotary hydraulic expansion wall scraper are indicated in accompanying illustrations. The "cylinder sub" has a tool joint pin on its upper end for screwing into the drill collar. A neck is provided giving ample room for handling the wall scraper. The body of the tool is constructed with a standard tool joint pin on its upper end to screw into the cylinder sub, and is also machined to receive the blades and all of the necessary operating mechanism. The lower or bottom end is machined with a standard tool joint box to receive the pin of a diamond point or fish tail bit.

The scraper blades are connected to the plunger rod by connecting links. The blades, as previously pointed out, are run into the hole in closed position with the aid of the coiled plunger spring.

When pump pressure is applied to the top of the plunger rod, its downward motion actuates the connecting links, which in turn throw the blades out and up to the desired horizontal position. This action is brought about through the movement of the blades on a hinge pin which extends through the body. A cutting edge is provided on the upper, rounded corner of the scraper blades, as these corners are first to come in contact with the formation in rotating them up to the normal horizontal cutting position.

When the various parts which go into it are assembled into the complete plunger rod, they form a piston head on the upper end of the plunger rod, which takes the pressure of the circulation fluid; and a circulation bean bushing at the lower end, which may be removed and replaced without difficulty when it becomes worn.

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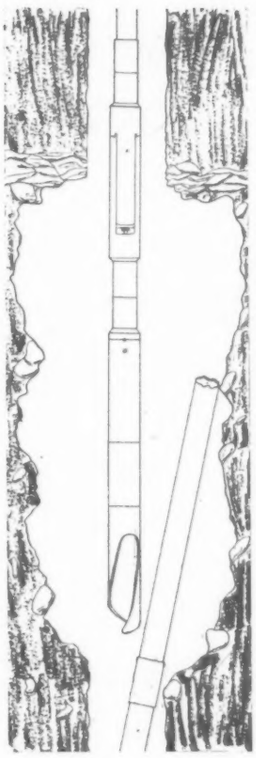

Fig. 1.—Sotco Socket lowered into the hole and ready to recover a twist-off.

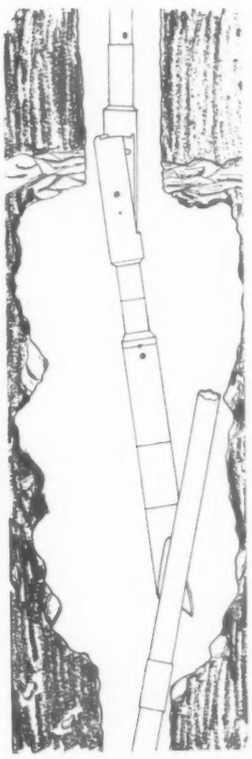

Fig. 2.—Sotco Socket engaging the pipe.

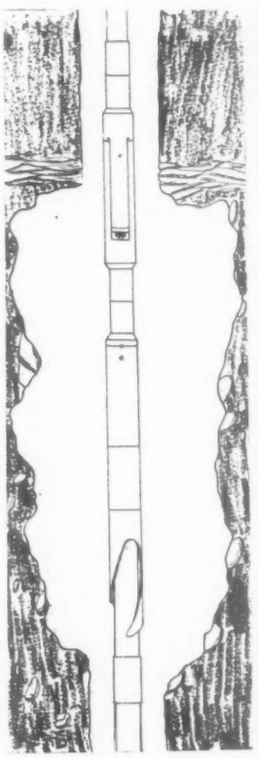

Fig. 3 shows pipe engaged and straightened up, ready to pull out.

If you own but one fishing tool, that one should be a Sotco Socket. It is one of the most effective tools ever devised, can be used for more variation of fishing jobs, and performs with almost human-like ingenuity. Built as a right-hand trip release tool, but also can be adapted to use as a left-hand tool.

Illustrations here show this Socket used in conjunction with the Sotco Hydraulic Knuckle, getting a piece of twisted-off drill pipe in a cave-in. It is equally effective in getting bent pipe in a straight hole, and for many other purposes.

Fitted with regular combination socket slips—actuated by hydraulic pressure. Engages the drill pipe at any elevation without depending on coupling shoulders. Can be rotated while circulating. Various features introduced into this socket take care of different conditions encountered in the hole. Will catch both drill pipe and collar—8⅝" to 2½".

SOTCO SOCKET

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FALLS MOTOR CORPORATION, Sheboygan Falls, Wis.
Manager of Sales, Steam Specialty Div

REDDEN MOTOR TRUCK CO., Chicago, Ill.
Works Manager.

Professional Consulting Experience

L. V. ESTES, INC., Chicago, Ill.
Manager, Field Work.

ROBERTS-PETTIJOHN-WOOD CORP., Chicago, Ill.
General Manager, Industrial Division

MANAGEMENT SERVICE COMPANY, Chicago, Ill.
Assistant to President

FORD, BACON & DAVIS, INC., New York
Consultant on Plant Operation and Management.

Professional Work covers operation, management, cost and sales consultation work either handled personally or directed in 129 different plants. Includes layout, design and management of construction of four large manufacturing plants.

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General Sales Manager

EASTON CAR AND CONSTRUCTION CO.
New York City
New York Manager

Los Angeles
Tulsa
Houston

NATIONAL TRANSIT
PUMP & MACHINE CO.
OIL CITY, PA.

New York
Philadelphia
Cleveland
Pittsburgh

TULSA and MID-CONTINENT FIELD
Frick-Reid Supply Corporation

NEW ORLEANS, LA.
Woodward, Wight & Co.

SALT LAKE CITY, UTAH
F. C. Richmond Machinery Co.

LOS ANGELES
Republic Supply Company of California

BEAUMONT, TEXAS
E. L. Wilson Hardware Company

PHOENIX, ARIZ.
Pratt-Gilbert Co.

ST. LOUIS, MO.
Reeves & Skinner Machinery Co.

Anderson Surveying System Result of Long Research

By BRAD MILLS
Staff Representative

***BEFORE** the surveying of oil wells was introduced, the average operator and petroleum engineer had been fully aware that holes were not vertical but the interest in straightening holes was mainly centered in the avoidance of sharp bends or crooks which caused difficulty in drilling or in running casing. Few, if any oil men, had visualized the great drift that a hole in good mechanical condition is capable of making and for this reason, when a dry hole was drilled between two excellent producers, a geologic cause, such as the existence of a fault, a tight place in the oil sand, or some other irregularity in the formations was believed to explain the failure of the well.*

During this period, wells were drilled with reckless speed, and so long as the well showed no signs of mechanical trouble, it was assumed to be vertical; and geologists and petroleum engineers based all their cross sections and calculations on a perfectly vertical measured depth.

Certain details of the construction of the Anderson oil well survey machine are presented here for the first time. Little has been published concerning the internal mechanism of the machine.

ALEXANDER ANDERSON, mining engineer, who had obtained a wide experience of many kinds of drilling in several foreign countries, happened to visit the California oil fields in 1920, and soon got the idea that rotary holes were making large underground drifts. He thought that the drifts were causing serious losses to the operators, and believed that there was a commercial opening for an underground survey company in the California fields.

He settled in Fullerton in 1921, and commenced to design underground survey apparatus and methods. During the years 1922 and 1923, he constructed his first survey machine, sighting devices, and pipe clamps, and went into business as a surveyor of oil wells in 1924.

At this period Anderson's workshop comprised only a single room in his residence, and he had a Model T Ford as his first work car. In 1925 a Buick replaced the Ford, and some progress was made towards getting a slightly larger amount of work.

The late Frank Morse Smith, geologist for Pan American Petroleum Company of California and a firm believer in the need for surveying wells, encouraged Anderson to continue his efforts to establish his business. Radical differences in correlated depths of adjoining wells, failures to obtain commercial production near good wells, unsatisfactory water shutoffs, and a dozen other discrepencies in the carefully compiled sub-surface records of the oil companies paved the way for a friendly reception of the idea of making underground surveys of oil wells. On the other hand, the fact that unfortunate legal consequences might result from such work was a factor that, at the beginning, militated strongly against the introduction of underground surveys.

More machines were gradually built, and the headquarters at Fullerton were enlarged so that by 1928 the business had become well known, and a number of operators had tested Anderson's work sufficiently often to appreciate its commercial value to them.

By 1930 the buildings occupied by the business covered four lots and a staff of over 50 people was employed.

The first model of the Anderson Survey Machine comprised a clock which controlled the movement of a cylindrical sheet of film past a number of openings in an opaque cylindrical light shield; a vertical spindle, mounted in jeweled bearings inside the light shield, carried a frame from which a series of swinging reflectors depended. Below the reflectors, also inside the shield, was an electric lamp, and below the lamp, a series of dry cells; the whole apparatus resting on cushioning springs inside the outer casing.

The clock operated a switch which flashed the light every four minutes. Beams of light were reflected from the reflectors onto the film to make a record of inclination and direction of inclination. The directions of inclination were measured from the axist of a sight hole in the nose of the apparatus.

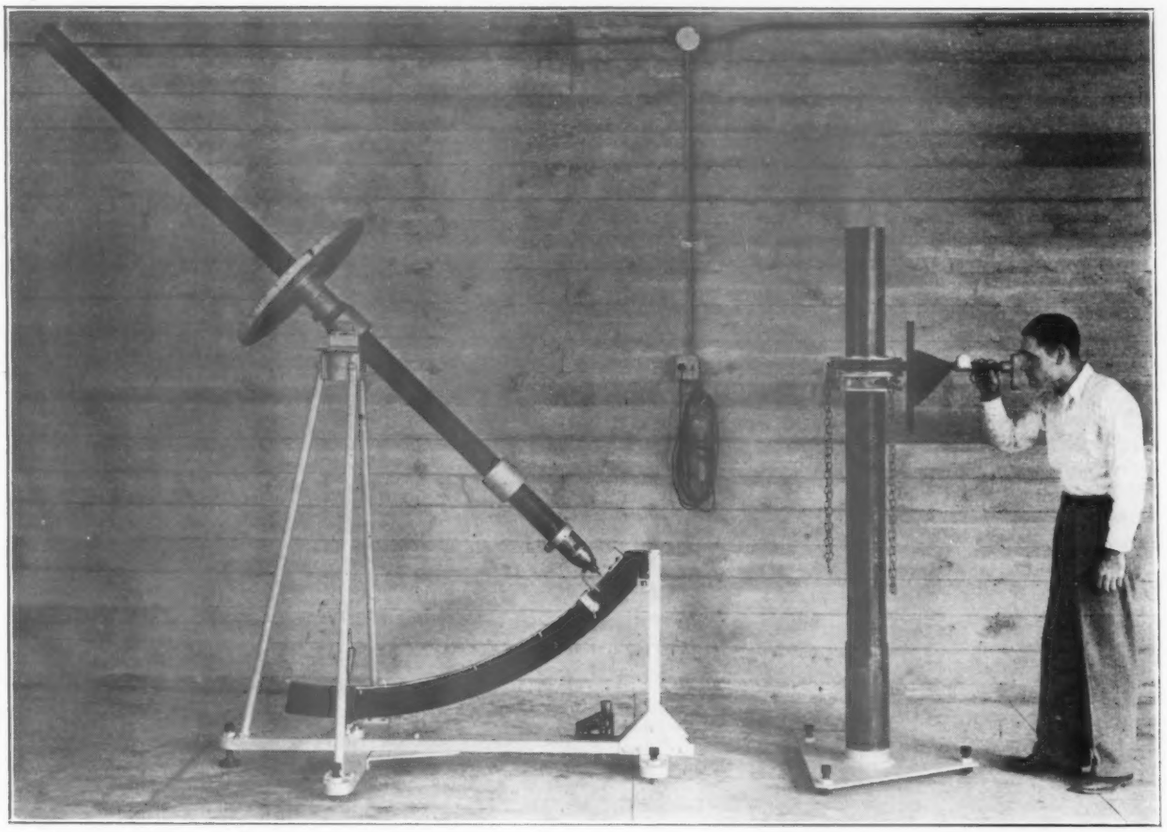
A few experiments with this model showed that the apparatus could be greatly improved. A complete redesign of the reflecting system was then undertaken, and additional patents were applied for. The present apparatus utilizes five separate reflecting units, each located opposite an aperture in the opaque shield. Each of these units is entirely independent and complete in itself, and each flashing of the light records five separate and independent records on the film.

This appartus is capable of making extremely accurate measurements of all inclinations and directions of inclination between vertical and 60° from the vertical.

The following description of Anderson's method of determining the direction in which the sight hole is pointing at each position underground is quoted from an article "Crooked Holes" written by Paul J. Howard, inspector, of the Division of Oil and Gas, State of California, and published in the June 1929 issue of "Summary of Operations California Oil Fields." Mr. Howard says:

"Alexander Anderson is the pioneer oil well surveyor of California, and he has achieved a remarkable reputation for good work.

"The instrument is attached to the bottom of the drill



A machine for testing accuracy is mounted so that it can be set at any inclination and rotated in any direction. Located in a private room, this machine is available for experimentation by those interested, to prove accuracy, of which the lower cut is a specimen

pipe. The direction in which the reference point of the instrument lies is determined by use of a sighting device placed in the bottom of the instrument case. Two clamps are attached to the drill pipe near the top of each stand before it is lowered into the well. The lower clamp is circular and graduated in degrees around part of its circumference. The top clamp has a horizontal cylindrical hole through it, forming a socket, at a tangent to the drill pipe. A sighting device is fitted into this socket. The device consists of a piece of ¾-inch pipe about three feet long with front and rear sights attached. The front sight is formed by a long vertical wire, stretched in a frame, and the rear sight consists of a row of small holes. A level bubble is provided for placing the sighting device in a vertical position. The sight is aligned with a previously designated distant object, a row of stakes being provided for emergencies, and the clamp is then tightened. The lower clamp may be set with its zero reading at a pointer which projects from the upper clamp. This is rarely done except when setting whipstocks. The sighting device is then withdrawn and the drill pipe lowered. After the next stand is made up, another sighting device, kept on the derrick floor, is fitted into the same socket.

"Along the side of the derrick nearest the distant object, a number of one-fourth-inch slats are laid in line, end to end, on suitable planks. A zero point on the slats in marked in line with the distant object and the sight bar hole. After lowering each stand of pipe, and placing the sighting device in the socket, a punch target, moved along the slats by a workman, is brought into the line of the sight and a mark is made on the slat. The marks are properly numbered.

TEST OF ACCURACY

ANDERSON OIL WELL SURVEY MACHINE

	TEST POSITIONS		READINGS REPORTED		ERRORS IN READINGS	
	INCLINATION	DIRECTION	INCLINATION	DIRECTION	INCLINATION	DIRECTION
	DEG. MIN.	DEGREES	DEG. MIN.	DEGREES	DEG. MIN.	DEG.
1	0° 30'	319°	0° 30'	344°	0° 00'	+ 25°
2	1° 30'	84°	1° 30'	83°	0° 00'	− 1°
3	1° 30'	91°	1° 30'	95°	0° 00'	+ 4°
4	3° 30'	219°	3° 30'	219°	0° 00'	00°
5	6° 00'	75°	6° 00'	76°	0° 00'	+ 1°
6	7° 30'	43°	7° 30'	40°	0° 00'	− 3°
7	9° 00'	307°	8° 45'	308°	− 0° 15'	+ 1°
8	10° 30'	224°	10° 15'	223°	− 0° 15'	− 1°
9	12° 00'	288°	12° 00'	288°	0° 00'	00°
10	13° 15'	200°	13° 00'	200°	− 0° 15'	00°
11	17° 00'	135°	17° 00'	136°	0° 00'	+ 1°
12	18° 30'	159°	18° 30'	160°	0° 00'	+ 1°
13	21° 00'	108°	21° 00'	107°	0° 00'	− 1°
14	22° 00'	332°	22° 00'	332°	0° 00'	00°
15	24° 45'	147°	25° 00'	147°	+ 0° 15'	00°
16	27° 45'	170°	28° 00'	170°	+ 0° 15'	00°
17	33° 00'	241°	33° 00'	242°	0° 00'	+ 1°
18	38° 30'	282°	39° 00'	280°	+ 0° 30'	− 2°
19	41° 30'	143°	42° 00'	142°	+ 0° 30'	− 1°

Brad Miller
The Oil Weekly
February 25, 1931

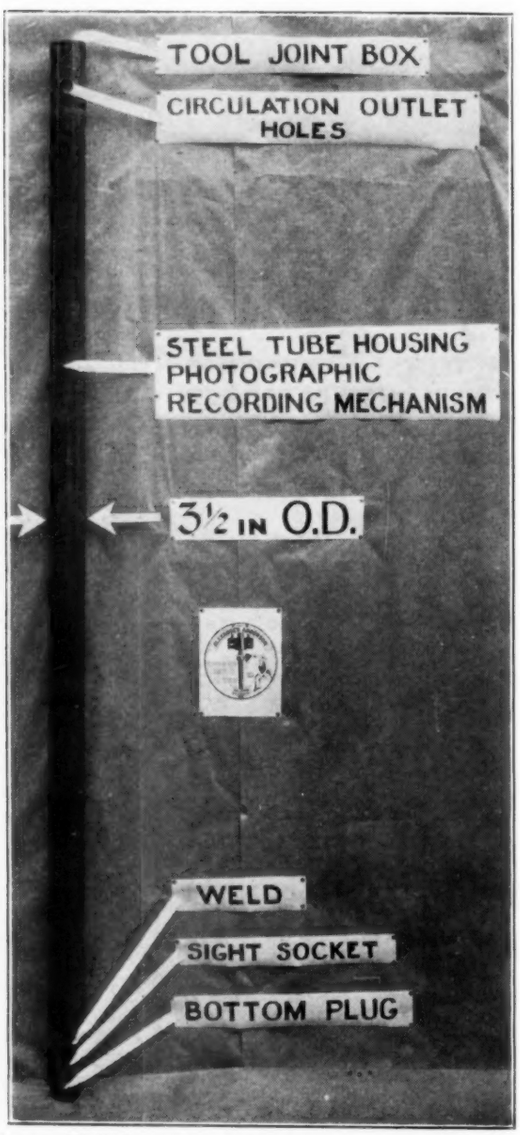
Knowing the perpendicular distance of the slats from the drill pipe, and knowing the distance along the slats from the zero point to the punch mark, the angle through which the drill pipe has rotated can be calculated. The distances of the various punch marks from the zero point are measured, and the angles calculated after leaving the derrick. When desirable, instead of using the slats, the upper clamp can be loosened and the bar sighted on the distant point. The angle turned by the sighting device is then read on the lower clamp. The drill pipe is oriented into the hole in order to determine the direction of the reference point of the instrument at the time each photograph is taken. Thus, the photographs give the amount of inclination and the direction of inclination as measured from the reference point of the apparatus, and the orienting calculations give the direction of the reference point at the corresponding positions in the hole."

Mr. Howard's article also describes several other bore hole survey instruments.

The latest Anderson apparatus makes 108 consecutive readings during one run in a well, or say 108 x 5 equals 540 individual records.

The developed film provides an extremely clear record which is very rapidly read and tabulated. The film record for a well of average depth is read in about half an hour. A particular advantage in the Anderson Survey machine is the multiple reading feature. The five records which compose each reading, check each other exactly. If the machine receives very rough usage in a well, as for instance when a fish is struck during the lowering of the apparatus, and one of the recorders should be damaged, the readings given by this recorder will cease to check with those of the other four recorders, and the bad readings can at once be eliminated.

Measuring rotation of survey machine. The sight is lined in the reference plane and there tightened. The pipe carrying the clamp is then lowered to the derrick floor level, the next stand made up and the amount of rotation of the sight socket measured



Anderson Well Surveying Machine ready to run into the well

Anderson is himself an ingenious mechanic. He built the mechanism and the clock of his first machine, he and his employees have continued to build all their own apparatus, and it is the custom in the Fullerton plant to have a draftsman working at a table in the machine shop alongside the mechanics. In this way, very intimate contact is obtained between the work of all engaged in the mechanical department of the plant.

As proof of the accuracy of the apparatus, a standard survey machine is provided for those interested in determining its qualities. The survey machine is mounted on a testing stand so that, by means of graduations on the vertical arc, it can be set at any inclination and, by means of a horizontal graduated disc attached to the machine, it can be rotated to point in any direction. The entire layout is maintained in a private room at Fullerton and tests have been made by engineers and operators from all parts of the world. The person who is making the test alone knows the position of the instrument when the various readings are taken at intervals of about four minutes. The film is developed and the readings reported by Anderson's organization. The results invariably check closely with the positions recorded by the testing party. The author ran a test without aid, and the developed film taken from the machine was the only record held by the inventor. The positions of the instrument, as determined from the developed film, checked almost exactly with those recorded during the actual test.

During the past seven years, any part of the apparatus which has been broken during the running of the machine in a well has at once been re-designed and the whole apparatus has now been so completely worked over that it is very robust and dependable.

At this date, Anderson's organization has surveyed nine million feet of rotary hole in California, and his work is known in every oil field throughout the world.

Markets • Production • Crude Prices

H. J. STRUTH, *Staff Economist, Houston, Texas*

Cheap Crude in East Texas Upsets Market Structure

Cheap oil from the new East Texas area has completely upset the national crude market structure. Week after week, it has been pointed out in this section that East Texas would prove to be the stumbling block of the crude market, with crude selling at an average of 35 cents a barrel and with operators there reconciled to a market price of 25 cents. Regardless of the statistical position of the industry, which has undoubtedly shown improvement, no company or group of companies seems willing to continue to buck the competition that has manifested itself in the shallow, low-cost producing area of East Texas. Whatever benefits had accrued through the advent of proration can now be said to have been practically dissipated. As a result, it is no longer a question of supply and demaand but a question of low cost, easy-to-get production that will dominate the industry's course of crude prices. If it is possible to produce and market oil at a profit in East Texas, at prices which prevail there, it is time for the industry to strike a new thought in oil conservation by saving expensive oil for future generations and developing sources of cheap oil to the limit.

A study of the possible effect of competition in the crude market seems to point definitely to a protracted period of low oil prices. In fact, it is not at all improbable that competitive forces within the industry will bring about a price war in the crude market, whereby oil from several flush areas will invade the market to the exclusion of many prominent grades. The recent slash in the general crude market is an indication of what competitive conditions, brought about through low-cost production in new areas, can do to the general oil market.

The writer was asked recently:

> "What is the value of crude oil on the basis of current supply and demand facts?"

The answer is:

> "If crude (36 gravity, Mid-Continent grade) was worth $1.36 a barrel on July 26, 1928, when the demand to supply ratio of United States crude was 148.7—or supply in storage represented that percentage of current demand—then, according to the same basis of evaluation, it is now worth $1.19 a barrel. Recent data indicates a demand to supply ratio of 130.7. However, the recent reduction in Mid-Continent oil fixed a price for 36 gravity crude of but 59 cents a barrel."

Study of all of the facts at hand may indicate that crude prices should be justifiably higher, but the fact remains that the present market situation is dominated more by fanciful facts that by actual facts. Thus, even though the industry has been successful in keeping oil in the ground, where proration intended for it to remain until actually needed, operators are faced now with the bugaboo of potential. Therefore, until leaders of the industry can see their way clear to consider potentials in a different light, or until some of the bubbles labeled potential begin to burst, there is little hope for recovery of the oil price structure.

Proration did offer—now offers—a sound solution of the industry's problem, but if the industry at large continues to reckon in terms of potentials and is influenced thereby to the extent of allowing its market structure to collapse, it might be better for all concerned if proration was thrown into the discard. If a number of so-called threatening potential areas were thrown wide open for a short time, there would be a startling shrinkage in the immeasurable supply that has become such an important factor in the economic situation.

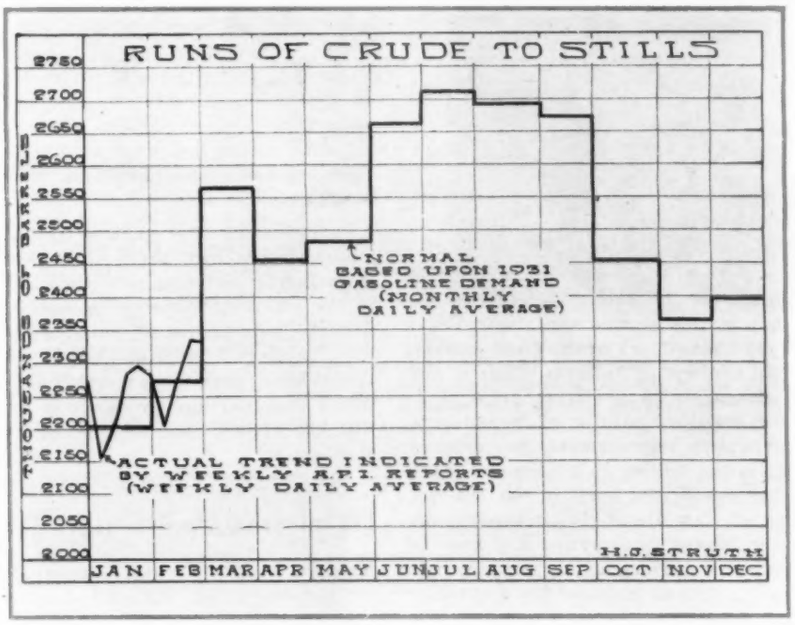
Oklahoma Production Trend Sends U. S. Total Upward

A sharp upturn in the daily average crude production curve of the United States last week of 55,800 barrels was practically all due to a resumption of the upward trend in output at Oklahoma City. A gain of 56,100 barrels was reported for Oklahoma, whereas the Oklahoma City field reported an increase of 62,650 barrels. Proration in Oklahoma continues to hang in the balance, as it were, with operators at Oklahoma City determined to force a higher allowable production limit, while at the same time, the outlook for importation from East Texas of low priced oil has further complicated matters. Announcement of the early construction of a line from East Texas to Oklahoma City, by Harry Sinclair, is looked upon with considerable apprehension in Oklahoma oil circles. What this project will mean is not difficult to foresee. What it may mean in the Oklahoma crude market is a fight for removal of the proration lid and a price war. Almost anything is liable to happen in the near future, with operators forced to market their oil at present prices, under restricted operation of their wells.

The situation in East Texas continues to throw fuel on the fire, with new wells coming in at a rapid rate and production mounting. Last week, Kilgore and Longview fields were added to the list of producing areas of Texas by the American Petroleum Institute, showing that these two new districts, alone, contributed nearly 27,000 barrels of oil daily. The Joiner area reported a decline of 4800 barrels. However, the net result for East Texas was another increase in production of more than 22,000 barrels a day. Texas, outside of the Gulf Coast, reported a net increase last week of 12,950 barrels daily, indicating that the gain in East Texas was offset to some extent by declines elsewhere. Analysis shows that Howard, Reagan and Winkler Counties and the Yates pool, in West Texas contributed to a combined decrease last week of more than 9000 barrels a day. While there is some question as to how long the East Texas wells will hold up, it is apparent that the present rate of drilling there will continue to stimulate production to a considerable degree for some time to come.

California also reported an increase in production last week; a gain for the state of 1200 barrels. Increases were

MARKET SECTION



reported by Elwood, Huntington Beach and Ventura Avenue, aggregating over 5000 barrels. These were offset to some extent, however, by declines at Long Beach, Playa del Rey and Santa Fe Springs. The market situation in California has shown many inequalities in comparison with the rest of the country, particularly in the gasoline market. The recent price reductions there are expected to bring about a general adjustment of gasoline prices that will more nearly conform to prices in other sections of the United States. In the meantime, however, marketers are putting up a stiff fight for gallonage and it is believed that present crude prices will effect more cut-rate selling than has been experienced in the past.

On the basis of actual and indicated allowables, last week's production figures show an excess for the United States of 94,700 barrels daily. On a cumulative basis, since January 1, however, the excess is but 52,300 barrels. To date, Texas shows the largest excess, with California following a close second. For the past week, Texas showed an excess production of 56,300 barrels; Oklahoma, 36,650 barrels; California, 23,500 barrels. Decreases in production were reported last week by Kansas, Gulf Coast, North

Crude Runs to Stills, Gasoline Stocks and Gas and Fuel Oil Stocks

Week ending February 28, 1931

(Figures in barrels of 42 gallons)

District—	Potential Capacity (Reporting) Total	Potential Capacity (Reporting) Reporting	Per Cent	Crude Runs to Stills Total	Daily Average	Per Cent Operated	Gasoline Stocks at Refineries	Gas & Fuel Oil Stocks
East Coast	612,700	612,700	100.0	3,080,000	440,000	71.8	7,939,000	7,300,000
Appalachian	141,300	132,500	93.8	674,000	96,300	72.7	1,480,000	1,096,000
Indiana, Illinois, Kentucky	390,800	381,000	97.5	2,027,000	289,600	76.0	5,140,000	3,026,000
Oklahoma, Kansas, Missouri	461,100	412,200	89.4	1,734,000	247,700	60.1	3,245,000	3,757,000
Texas	809,000	743,500	91.9	3,825,000	546,400	73.5	7,290,000	9,421,000
Louisiana-Arkansas	266,600	262,000	98.3	1,008,000	144,000	55.0	1,801,000	2,337,000
Rocky Mountain	150,100	139,700	93.1	262,000	37,400	26.8	1,851,000	893,000
California	898,500	887,600	98.8	3,253,000	464,700	52.4	16,046,000	101,315,000
Total Week Feb. 28	3,730,100	3,571,200	95.7	15,863,000	2,266,100	63.5	44,792,000	129,145,000
Total Week Feb. 21	3,730,100	3,571,200	95.7	15,893,000	2,270,400	63.6	43,608,000	129,072,000
Total March 1, 1930	3,650,900	3,487,400	95.5	18,201,000	2,600,100	74.6	*52,403,000	*138,091,000
The Texas and Louisiana Gulf Coastal Figures Shown Below are Included Above in the total of their respective districts.								
Texas Gulf Coast	529,500	529,500	100.0	3,035,000	433,600	81.9	6,030,000	7,057,000
Louisiana Gulf Coast	147,500	147,500	100.0	691,000	98,700	66.9	1,591,000	1,266,000

*Revised due to change in California .

MARKET SECTION

HOW LAST WEEK'S DAILY AVERAGE PRODUCTION COMPARES WITH NECESSARY AND NORMAL QUOTA LIMIT

State—	Indicated Demand First Quarter 1931	Economic Limit First Quarter 1931	Daily Average Last Week	Daily Excess Last Week	Daily Average Since January 1	Daily Excess Since January 1
Arkansas	54,000	52,000	47,950	—4,050	50,095	—1,905
California	547,000	500,000*	523,500	23,500	530,839	30,839
Kansas	109,000	105,000	112,450	7,450	110,438	5,438
Louisiana	73,000	71,000	67,800	—3,200	69,828	—1,172
Oklahoma	510,000	465,000*	501,650	36,650	466,076	1,076
Texas	739,000	644,000*	700,300	56,300	679,215	35,215
Balance of U. S.	236,000	225,000	203,050	—21,950	207,809	—17,191
Total	2,268,000	2,062,000	2,156,700	94,700	2,114,300	52,300

* Allowable.

Louisiana, Arkansas, Eastern States and Rocky Mountains. The declines aggregated 14,450 barrels, while the gains reported by Oklahoma, Texas and California aggregated 70,250 barrels.

Union Oil Company Leads In California Price Cut

Union Oil Company of California took the initiative for the first time and reduced the prices of principal California crudes by a wide margin. In the past, Standard Oil Company of California, principal purchaser, has started all major price reductions. The reductions averaged 50 cents per barrel, giving Santa Fe Springs a minimum of 65 cents for 19 gravity oil and a maximum of 98 cents for 40 gravity crude and better. Forty gravity and up at Kettleman Hills has been reduced to 90 cents.

In announcing the reduction, Union Oil Company based

Cracked Gasoline Production

Week ending February 28

(Barrels of 42 gallons)

District	Potential Total	Charging Reporting	Capacity Per Cent	Production Total	Daily Average
East Coast	246,900	222,900	90.3	533,000	76,100
Appalachian	45,900	43,400	94.6	136,000	19,400
Ind., Ill., Ky.	294,200	280,200	95.2	389,000	55,600
Okla., Kans., Mo.	219,900	197,900	90.0	347,000	49,600
Texas	395,500	379,400	95.9	749,000	107,000
Louisiana-Arkansas	109,400	107,900	98.6	226,000	32,300
Rocky Mountain	95,100	95,100	100.0	97,000	13,900
California	182,700	178,700	97.8	269,000	38,400
Total week Feb. 28	1,589,600	1,505,500	94.7	2,746,000	392,300
Total week Feb. 21	1,589,600	1,505,500	94.7	2,753,000	393,300
Total March 1, 1930		Not Available.			
The Texas and Louisiana Gulf Coast Figures Shown Below are included in the totals of their respective districts.					
Texas Gulf Coast	305,000	300,500	98.5	613,000	87,600
Louisiana Gulf Coast	77,000	77,000	100.0	172,000	24,600

Imports of Petroleum

(Barrels of 42 gallons)

	Week Ended February 28	Week Ended February 21
AT ATLANTIC COAST PORTS—		
Baltimore	114,000	.....
Boston	59,000	290,000
New York	1,257,000	688,000
Philadelphia	145,000	155,000
Others	364,000	187,000
Total	1,939,000	1,320,000
Daily Average	277,000	188,571
AT GULF COAST PORTS—		
Galveston District	64,000	.....
New Orleans and Baton Rouge	76,000	70,000
Port Arthur and Sabine District	.....	.....
Tampa	.....	15,000
Total	140,000	85,000
Daily Average	20,000	12,143
AT ALL UNITED STATES PORTS—		
Total	2,079,000	1,405,000
Daily Average	297,000	200,714
Daily Average Four Weeks Ended	259,179	236,250
Distribution of Total Imports Is As Follows:		
Crude	1,149,000	819,000
Gasoline	366,000	159,000
Fuel Oil	564,000	427,000
Total	2,079,000	1,405,000

California Oil Receipts

(Barrels of 42 gallons)

	Week Ended February 28	Week Ended February 21
AT ATLANTIC COAST PORTS—		
Baltimore	.....	116,000
Boston	.....	.....
New York	198,000	219,000
Philadelphia	.....	.....
Others	.....	34,000
Total	198,000	369,000
Daily Average	28,286	52,714
AT GULF COAST PORTS—		
Total	.....	75,000
Daily Average	.....	10,714
AT ATLANTIC AND GULF COAST PORTS—		
Total	198,000	444,000
Daily Average	28,286	63,428
Daily Average Four Weeks Ended	43,821	57,643
Distribution of Total California Oil Receipts Is As Follows		
Gasoline	198,000	311,000
Kerosene	.....	47,000
Gas Oil	.....	75,000
Lubricants	.....	11,000
Total	198,000	444,000

MARKET SECTION

United States Daily Average Production

1930	Oklahoma	Kansas	Texas (Outside Gulf Coast)	Gulf Coast	North Louisiana	Arkansas	Eastern States	Rocky Mountain	California	United States Daily Av.	United States Total
March	622,650	115,500	644,400	206,000	41,600	58,600	132,700	73,600	649,000	2,544,050	78,865,400
April	657,050	122,200	640,950	206,800	42,100	57,800	138,700	75,950	625,700	2,576,250	77,018,100
May	663,300	131,000	662,350	203,900	39,900	53,800	137,150	82,500	623,700	2,597,700	80,529,600
June	665,550	133,600	668,300	210,500	40,300	56,900	135,750	84,600	598,000	2,593,500	77,806,900
July	594,750	121,600	652,350	209,400	40,550	55,400	137,200	98,350	610,450	2,520,050	78,121,200
August	558,850	115,650	646,400	206,600	41,500	55,100	128,550	106,000	611,250	2,470,900	76,597,600
September	558,900	116,550	606,550	200,750	40,150	53,550	121,400	110,650	604,900	2,413,400	72,402,205
October	542,100	114,850	609,500	194,850	41,500	52,800	121,750	104,000	590,800	2,372,150	73,536,350
November	491,550	111,400	579,350	190,100	44,050	52,000	116,400	101,950	601,200	2,288,000	68,639,150
December	459,300	105,550	533,400	189,300	43,000	51,100	112,200	100,500	587,450	2,181,800	67,636,500
1931											
January	452,000	106,350	511,050	188,850	41,100	50,700	110,300	96,700	535,700	2,092,750	64,874,450
February*	472,750	114,450	523,700	185,600	43,900	49,950	109,800	100,100	527,250	2,127,600	59,572,450
February 28	445,550	113,100	533,300	183,250	42,800	50,050	112,450	98,100	522,300	2,100,900	14,706,300
March 7	501,650	112,450	546,250	180,600	41,250	47,950	109,000	94,050	523,500	2,156,700	14,096,900
Increase	56,100	.....	12,950	.....	.....	.....	.....	.....	1,200	55,800	390,600
Decrease	.....	650	.....	2,650	1,550	2,100	3,450	4,050	.....	.....	.....

*Preliminary—Subject to revision.

TEXAS (Outside Gulf Coast)

PANHANDLE DISTRICT

	March 7	Feb. 28
Carson County	3,800	3,750
Gray County	39,000	37,850
Hutchinson County	9,500	10,500
Wheeler County	500	300
Others	250	300
Total	53,050	52,700

NORTH TEXAS

Archer County	12,500	12,450
Burkburnett	7,550	7,550
Electra	8,700	8,750
Iowa Park-KMA	4,300	3,750
Montague and Cooke Counties	6,250	6,200
Wilbarger	10,100	10,150
North Young County	8,300	8,350
Others	1,800	1,500
Total	59,500	58,700

WEST CENTRAL TEXAS

Brown County	4,100	4,150
Callahan County	2,000	2,200
Coleman County	1,100	1,000
Eastland-Desdemona	4,000	3,700
Jack County	900	900
Palo Pinto County	400	400
Shackelford County	4,000	4,100
Stephens County	4,600	4,850
Throckmorton County	500	500
South Young County	2,400	2,400
Others	1,200	1,000
Total	25,200	25,200

WEST TEXAS

Crane-Upton Counties	23,850	24,500
Crockett County	1,800	1,800
Ector	5,700	6,150
Howard County	21,700	25,450
Jones County	1,200	1,200
Mitchell-Scurry Counties	1,800	1,850
Pecos County	2,600	3,400
Reagan County	28,050	29,400
Winkler County	48,300	50,700
Yates	90,450	92,300
Others	7,300	6,800
Total	232,750	243,550

EAST CENTRAL TEXAS

Boggy Creek	2,400	2,550
Corsicana-Powell	4,800	4,800
Currie	300	300
Joiner District	29,100	33,900
Kilgore	22,350	....
Mexia	3,800	3,800
Longview	4,600	....
Nigger Creek	150	150
Richland	100	100
Van Zandt	32,450	30,300
Wortham	600	600
Others	50	50
Total	100,700	76,550

SOUTHWEST TEXAS

Chapman-Abbott	5,300	5,700
Dale	250	250
Darst Creek	28,200	29,050
Laredo District	13,700	13,400
Luling	9,600	9,600
Lytton Springs	700	700
Salt Flat	15,500	16,100
Somerset	1,300	1,300
Others	500	500
Total	75,050	76,600
T'tl Tex. (outside Gulf Coast)	546,250	533,300

TEXAS GULF COAST

Barbers Hill	20,700	21,450
Batson	1,000	1,000
Big Creek	2,700	2,750
Blue Ridge	1,250	1,300
Boling	700	650
Damond Mound	650	600
Esperson	*2,500	2,400
Fannett	600	600
Goose Creek	4,300	4,500
Hankamer	2,300	2,450
Hull	6,200	6,350
Humble	9,300	9,400
Moss Bluff	200	350
North Dayton	600	400
Orange	1,900	1,950
Orchard	1,900	2,000
Pettus	6,950	7,000
Pierce Junction	8,800	9,100
Port Neches	1,500	1,500
Raccoon Bend	9,250	9,200
Refugio	33,100	33,550
Saratoga	1,100	1,000
Somerville	2,200	1,850
Sour Lake	2,050	2,000
South Liberty	2,450	2,500
Spindle Top	11,700	12,400
Sugar Land	11,900	12,200
West Columbia	4,250	4,250
Others	2,000	2,000
Total	154,050	156,700
Texas Total	700,300	690,000

OKLAHOMA

Allen	12,200	11,950
Asher	700	700
Blackwell	2,800	2,800
Bowlegs	10,750	11,750
Braman	1,950	1,950
Bristow Slick	12,750	12,600
Burbank	13,400	13,800
Carr City	11,650	12,550
Cromwell	4,850	4,800
Cushing	12,550	12,500
Davenport	900	900
Duncan District	7,400	7,400
Earlsboro	15,900	17,550
East Earlsboro	14,200	17,650
East Little River	9,550	9,400
East Seminole	1,100	1,350
Fox	1,000	950
Garber	3,900	3,900
Graham	3,000	2,950
Healdton	10,600	10,600
Hewitt	6,050	6,050
Hubbard	1,000	1,000
Konowa	19,300	14,850
Little River	18,500	21,550
Logan County	4,050	4,150
Maud	2,100	2,900
Mission	3,550	5,250
North Okmulgee	8,800	4,200
Oklahoma City	128,250	65,600
Osage (outside Burbank)	23,000	23,000
Papoose	2,050	2,050
Pearson	550	550
St. Louis	20,300	20,050
Sasakwa	3,600	3,700
Scholem Alechem	13,650	13,600
Searight	4,850	5,050
Seminole	12,350	13,750
South Earlsboro	6,450	8,050
South Okmulgee	5,300	4,600
Thomas	600	600
Tonkawa	5,150	5,150
West Asher	7,600	7,450
Wewoka	7,850	10,750
Yale Jennings	7,150	7,150
Others	38,450	36,450
Total	501,650	445,550

CALIFORNIA

Dominguez	11,400	11,200
Elwood-Goleta	33,500	30,500
Huntington Beach	21,800	20,500
Inglewood	15,600	15,400
Kettleman Hills	26,600	26,700
Long Beach	91,000	92,100
Midway-Sunset	52,300	52,300
Playa del Rey	28,900	30,900
Santa Fe Springs	71,000	72,300
Seal Beach	16,100	15,600
Ventura Avenue	45,000	44,000
Others	110,300	110,800
Total	523,500	522,300

KANSAS

Augusta-Fox Bush	3,050	3,050
Churchill	3,500	3,550
Eldorado-Towanda	12,900	12,950
Florence-Covert	700	700
Greenwood County	16,700	16,750
Oxford	2,300	2,300
Peabody-Ebling	1,700	1,700
Rainbow Bend	1,500	1,450
Russell	3,200	3,200
Sedgwick	20,750	20,700
Voshell	19,650	20,750
Others	26,500	26,000
Total	112,450	113,100

NORTH LOUISIANA

Caddo Heavy	2,800	2,850
Caddo Light	7,950	8,100
Carterville	1,600	1,650
Cotton Valley	1,800	1,800
DeSoto-Red River	2,750	2,700
Haynesville	5,650	5,600
Holly	600	650
Homer	3,400	3,350
Urania	4,600	4,900
Zwolle	8,500	9,700
Others	1,600	1,500
Total North Louisiana	41,250	42,800

LOUISIANA GULF COAST

Bayou Boullion	150	100
East Hackberry	2,450	2,400
Edgerly	800	850
Evangeline	750	650
Hackberry	650	800
Lake Barre	2,750	2,850
Lockport	4,750	5,000
Port Barre	1,650	1,800
Sorrento	50	50
Sulphur Dome	1,750	1,800
Sweetlake	1,100	1,100
Vinton	6,500	5,850
White Castle	1,000	900
Others	2,200	2,400
Total Louisiana Gulf Coast	26,550	26,550
Louisiana Total	67,800	69,350

ARKANSAS

Champagnolle	3,250	4,550
El Dorado	3,800	3,850
Lisbon	800	800
Nevada	1,000	1,000
Smackover Heavy	32,650	33,500
Smackover Light	4,450	4,400
Stephens	850	850
Others	1,150	1,100
Total	47,950	50,050

MOUNTAIN STATES

WYOMING

Big Muddy	1,950	1,900
Elk Basin	700	650
Grass Creek	2,100	2,200
La Barge	2,000	1,550
Lance Creek	200	200
Lost Soldier	3,950	3,900
Oregon Basin	1,550	1,900
Rock River	2,050	2,050
Salt Creek	26,550	27,000
Others	3,500	3,800
Total	44,550	45,150

MONTANA

Cat Creek	1,050	1,100
Pondera	1,600	1,750
Sunburst	4,250	4,500
Others	1,150	1,400
Total	8,050	8,750

COLORADO

Florence	400	500
Fort Collins	1,000	1,050
Moffats (Craig)	1,050	1,050
Others	1,750	1,800
Total	4,200	4,400

NEW MEXICO

Artesia	650	650
Balance Lea County	5,350	6,100
Eddy	200	50
Hobbs High	29,600	31,650
Hogback	450	450
Rattlesnake	900	800
Table Mesa	100	100
Total	37,250	39,800
Total Mountain States	94,050	98,100

EASTERN STATES

(Including Ill., Ind., Ohio, W. Va., Pa., Ky., N. Y.)	100,000	103,000
Michigan	9,000	9,150
Total Eastern States	109,000	112,450

PRODUCTION SUMMARY

East of Rockies	1,539,150	1,480,500
Total U. S.	2,156,700	2,100,900

MARKET SECTION

its action of economic conditions within the industry. Low gasoline prices was the final factor causing the new price schedule. The market has been ticklish for weeks, and the drop was not altogether unexpected. Standard Oil Company of California met prices posted by Union Oil Company.

The gasoline price war has assumed a more serious aspect, and it is difficult to predict the outcome of such low retail prices. Previous to the crude price reductions, it was almost impossible for the price-cutters to buy crude, refine it and make a profit on gasoline. The present low crude quotations work for, more than against, the refiner who ordinarily sells his refined products below the majors. With a high differential during price wars, conversion of high price crude into low price gasoline resulted in an ultimate loss. The crude price reduction was in a way a claim for justification of low gasoline prices.

Claims that gasoline prices have been too high in California now seem to have been based on good logic. Mid-Continent and Eastern prices were lower than those posted in San Francisco, Seattle and Los Angeles.

An inclination to take only as much oil as the principal purchasers can use seems to be growing. The plan inaugurated by Richfield Oil Company to take the producers' oil and run it "down the line" to market is being considered by other purchasing companies. Since the ultimate return to the producer is largely based on gasoline prices, the present outlook for the producer is not bright. Limiting of purchases seems justified, however, at this time.

The two-cent differential between tank wagon and service station prices now maintained by Standard Oil Company of California has affected all branches of the market down the line to the producer. Although principally designed to prevent the retailer from allowing confidential discounts, premiums, etc., the producer will feel the effects of a lower differential, especially where the new type of crude purchases is in effect.

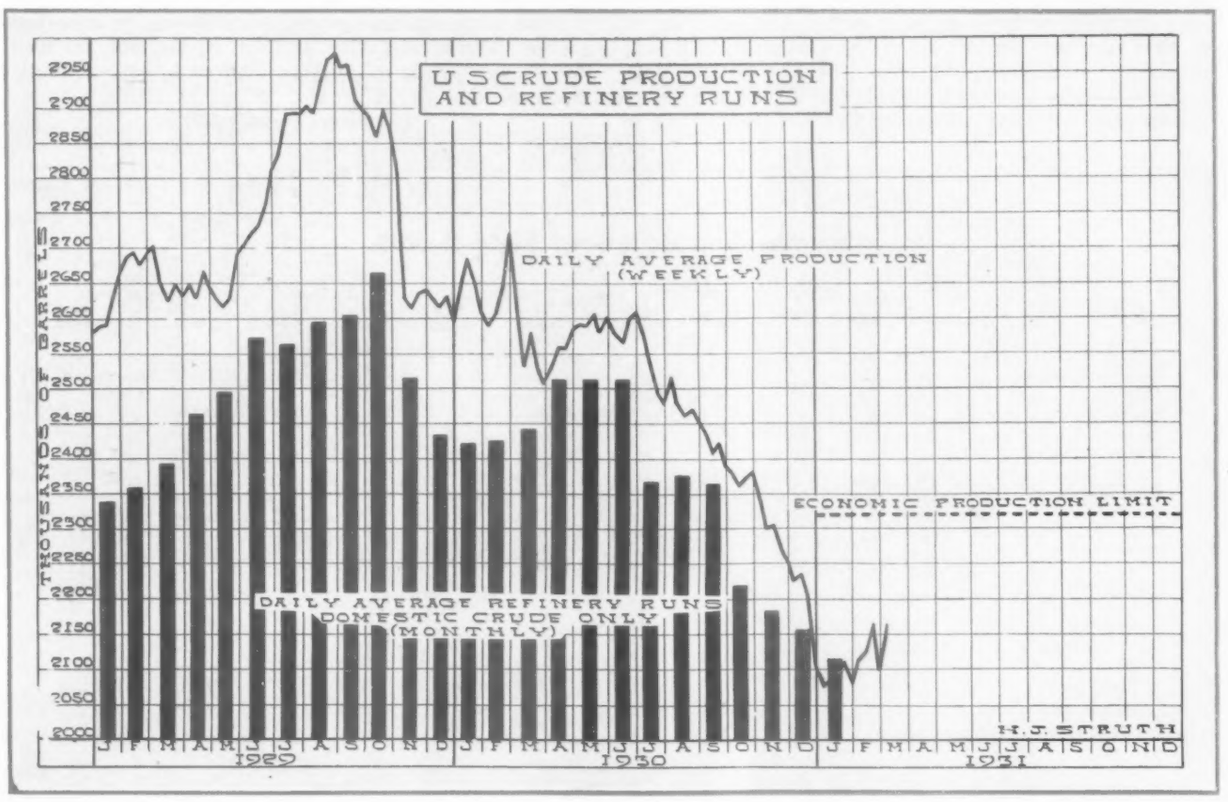
The effect of lower crude prices on curtailment is problematical. Some think that curtailment should be thrown overboard so the industry can swim out on a supply-and-demand basis, while others hold out for a suppressed production.

Seubert Explains to Murray Why Oklahoma Price Was Cut

Crude price schedules began tumbling in the Mid-Continent area March 5, when Stanolind Crude Oil Purchasing Company announced a revised schedule, with 67 cents a barrel as the top price, for crude of 40 gravity and above, with 43 cents a barrel the low figure for crude of 29 gravity and below. Between these two the differential is two cents for each degree on the gravity schedule.

Monday of this week Carter Oil Company announced reductions to meet the schedule. This is taken to indicate that all purchasers will meet the lowered prices.

The drop in the price structure, although long anticipated, was not without its political comedy. March 4 the Oklahoma Corporation Commission increased the allowable output at Oklahoma City from 125,000 to 150,000 bar-



MARKET SECTION

Comparison of Permits Granted for New Wells

State—	Week Ending March 7	Previous week	This week 1930	Total this Month	This month 1930	Total this year	Total this date last year	1930 year total
Arkansas	..	..	3	..	5	12	25	108
California	14	5	12	14	30	67	151	922
Louisiana	4	4	21	4	86	69	184	948
Kansas	9	14	14	9	41	112	174	944
Oklahoma	19	13	61	19	126	223	505	2,830
Texas	132	84	163	132	327	846	1,418	7,052
Total	178	120	274	178	615	1,329	2,557	12,804

rels per day. The decision, given verbally following a hearing on the petition of Sinclair Oil & Gas Company, had hardly ceased to echo in the Oklahoma State House when Governor William H. Murray asked for a conference with the corporation commission. Following this another order was written, reducing the Oklahoma City allowed output back to 125,000 barrels daily, provided the Stanolind Crude Oil Purchasing Company would restore the higher price schedule.

The Oklahoma governor sent the following message to E. G. Seubert, president of the Standard Oil Company (Indiana):

"You are advised that at my request on this date the corporation commission of this state entered its order revoking the order made on yesterday increasing the allowable oil and other matters in entirety and hold same in abeyance until a later date. It appears that this action of your company in establishing a new posted price on oil of this state was by reason of the action of said commissioners in making said order. Such action by your company will have a disastrous effect on the whole industry of this state and your efforts to stabilize the matters in the oil producing states. The matters will be discussed at the conference of the oil states committee at Texarkana, Arkansas, Monday, March 9. I urgently request that your company immediately place in effect an order revoking your order of March 4 and that the price of oil remain as of prior to that date. Will use my best effort and offices to prevent if possible your competitors securing oil at reduced price."

In reply the president of the Indiana company said:

"The economic situation forced us to cut price of crude oil as our action was taken after weeks of deliberation before we knew of your commission's order increasing the allowable output of your state. The impelling reason was that in the face of over-production there is excessive drilling and constantly increasing willingness on the part of producers to accept lower prices. Our competitors have taken advantage of this situation and are now buying more than a hundred thousand barrels of oil daily, much of which is from your state, at prices below those we have been paying. These companies or their connections are using this cheaper crude to compete with us in selling finished products.

(*Continued on page 120*)

Summarized Review of Field Results

State—	Completions This week	Completions Last week	Oil Wells This week	Oil Wells Last week	Gas Wells This week	Gas Wells Last week	Failures This week	Failures Last week	Initial Prod. This week	Initial Prod. Last week
Arkansas	4	..	3	..	..	..	1	..	110	...
California	6	3	4	3	..	..	2	..	1,575	960
Illinois	4	1	..	1	..	..	4	..	...	5
Indiana	2	2	2	1	..	..	..	1	115	3
Kansas	17	12	10	6	3	3	4	4	7,355	690
Kentucky	11	29	7	6	1	13	3	10	586	800
Louisiana	11	10	2	1	2	1	7	8	488	600
Michigan	1	..	..	..	..	..	1	..	...	...
Mississippi	1	2	..	..	..	2	1	..	...	...
New Mexico	1	..	..	..	..	..	1	..	...	...
New York	..	2	..	2	..	..	..	..	...	5
Ohio	28	37	6	9	17	15	5	13	36	113
Oklahoma	31	40	21	23	3	4	7	13	97,707	33,452
Pennsylvania	2	18	..	10	1	7	1	1	...	22
Texas	84	69	32	33	4	5	48	31	71,324	65,553
West Virginia	17	16	3	2	13	11	1	3	57	11
Total	220	240	90	97	44	61	86	84	179,353	102,214
Increase this week	..	..	..	..	..	..	2	..	77,139	...
Decrease this week	22	..	7	..	17	..	..	..	...	...

MARKET SECTION

Crude Oil Price Quotations

(Revised to March 10, 1931)

▼ ▼ ▼

Crude Price Changes

Effective March 5—Stanolind Crude Oil Purchasing Company posted reductions on all grades of Mid-Continent crude, ranging from 12 cents to 40 cents a barrel.

Effective March 5—Magnolia Petroleum Company reduced all grades of Oklahoma, Kansas and North Texas crude from 13 cents to 40 cents a barrel.

Effective March 5—Ohio Oil Company posted reductions on Central West and Rocky Mountain crudes, ranging from 35 to 50 cents a barrel.

Effective March 10—Union Oil Company of California initiated a sweeping reduction in the California crude market, posting reductions in practically all fields of the state from 5 cents to 60 cents a barrel. The reduction was met by Standard Oil Company, California.

Effective March 10—Humble Oil & Refining Company posted reductions for all grades of North Texas, Panhandle, West Texas and Lea County, New Mexico, crudes. West Texas and New Mexico oil is now purchased on a flat-price basis of 40 cents a barrel. Salt Flat and Darst Creek crude prices were slashed 30 cents a barrel; Pettus crude 15 cents a barrel. Gray County and Carson-Hutchinson County, Panhandle oils, are now quoted on a new gravity scale which begins at 35 degrees, ending at 40 and above.

Effective March 10—Standard Oil Company, Louisiana, posted reductions on all grades of Louisiana and Arkansas crude. The reductions ranged from 28 cents to 55 cents a barrel.

EASTERN STATES

(Posted by Joseph Seep Purchasing Agency)

Bradford—Alleghany district (posted by Tide Water Pipe Co., Ltd.) (Effective Nov. 13, 1930) $2.15

Penna. Grade Oil in National Transit Lines (Other Pennsylvania) (Effective, Nov. 13, 1930) 1.85

Penna. Grade Oil in Southwest Penna. Pipe Lines (Other Pennsylvania) (Effective Nov. 13, 1930) 1.80

Penna. Grade Oil in Eureka Pipe Lines (West Virginia) (Effective Nov. 13, 1930) 1.70

Penna. Grade Oil in Buckeye Pipe Lines (Macksburg, O.) (Effective Nov. 13, 1930) 1.45

Corning Grade in Buckeye Pipe Lines (Ohio) (Effective Oct. 28, 1930)..... 1.25

Somerset Oil in Eureka Pipe Lines (Effective July 23, 1930) 1.14

Ragland Grade in Cumberland Pipe Lines (Kentucky) (Effective Jan. 9, 1929)... 0.60
*Oil run prior to July 1, 1929 is $2.10 per bbl.

(Posted by Stoll Oil Refining Company)

Oil City, Ky., oil in Stoll lines (Effective Nov. 8, 1930) 1.00

MICHIGAN

(Posted by Dixie Oil Company)

Traverse and Dundee (Muskegon), effective April 16, 1930, same gravity and price schedule as Prairie posts in Oklahoma and Kansas, on gravity basis prior to reduction on Oct. 27, 1930.

(Posted by Pure Oil Company)

Midland, Midland County, Oct. 27, 1930..$1.10

CENTRAL STATES FIELDS

(Posted by Ohio Oil Company)

(Effective March 5, 1931)

Wooster	$ .99	Princeton	.80
Lima	.90	Illinois	.80
Waterloo	1.20	W. Kentucky	.75
Indiana	.50		

CANADIAN CRUDE

(Posted by Imperial Oil Refineries, Ltd.)

(Effective October 28, 1930)

Petrolia	$1.50
Oil Springs	1.57

OKLAHOMA, KANSAS and NORTH TEXAS

Prices of Stanolind Crude Oil Purchasing Company and Prairie Oil & Gas Company, Effective Nov. 1, 1930. Carter Oil Company Same Schedule Effective March 5, 1931

Below 29	$ .43	35-35.9	.57
29-29.9	.45	36-36.9	.59
30-30.9	.47	37-37.9	.61
31-31.9	.49	38-38.9	.63
32-32.9	.51	39-39.9	.65
33-33.9	.53	40 and above	.67
34-34.9	.55		

(Continued on page 98)

California Prices

Effective March 10, 1931, at 7 A. M. Following are Current Prices Offered by STANDARD OIL COMPANY OF CALIFORNIA

Gravity	Signal Hill	Seal Beach	Alamitos Heights	Huntington Beach	Inglewood	Olinda Brea Canon	Athens Rosecrans Dominguez	Elwood Terrace	Torrance	Richfield	Whittier La Habra	Montebello	Coyote Hills	Santa Fe Springs	Newhall McKittrick Kern River	Midway-Sunset Elk Hills	Buena Vista Hills	Lost Hills	Coalinga	Wheeler Ridge	Playa Del Rey	Kettleman Hills*
14-14.9	$ .65	$ .65	$ .65	$ .65	$ .65	$ .65			$ .65	$ .65	$ .65	$ .65	$ .65		$ .55	$ .55	$ .55	$ .55	$ .55	$ .55		
15-15.9	.65	.65	.65	.65	.65	.65			.65	.65	.65	.65	.65		.55	.55	.55	.55	.55	.55		
16-16.9	.65	.65	.65	.65	.65	.65			.65	.65	.65	.65	.65		.55	.55	.55	.55	.55	.55		
17-17.9	.65	.65	.65	.65	.65	.65			.65	.65	.65	.65	.65		.55	.55	.55	.55	.55	.55		
18-18.9	.65	.65	.65	.65	.65	.65			.65	.65	.65	.65	.65		.55	.55	.55	.55	.55	.55		
19-19.9	.65	.65	.65	.65	.65	.65			.65	.65	.65	.65	.65	.65	.55	.55	.55	.55	.55	.55		
20-20.9	.66	.66	.66	.66	.66	.66			.66	.66	.66	.66	.66	.66		.56	.56	.56	.56	.56	.56	
21-21.9	.67	.67	.67	.67	.67	.67			.67	.67	.67	.67	.67	.67		.57	.57	.57	.57	.57	.57	
22-22.9	.68	.68	.68	.68	.68	.68			.68	.68	.68	.68	.68	.68		.58	.58	.58	.58	.58	.58	
23-23.9	.70	.70	.70	.69	.69	.69			.70	.69		.69	.69	.69		.59	.59	.59	.59	.59	.59	
24-24.9	.72	.72	.72	.70	.70	.70	.72		.72	.70		.70	.70	.70		.60	.60	.60	.60	.60	.60	
25-25.9	.74	.74	.74	.71	.71	.71	.74		.74	.71		.71	.71	.71		.62	.62	.62	.62	.62	.61	
26-26.9	.76	.76	.76	.72	.72	.72	.76		.76	.72		.72	.72	.72		.64	.64	.64	.64	.64		
27-27.9	.78	.78	.78	.73	.73	.73	.78		.78	.73		.73	.73	.73		.66	.66	.66	.66	.66		
28-28.9	.80	.80	.80	.75	.75	.75	.80		.80	.75		.75	.75	.74		.68	.68	.68	.68			
29-29.9	.82	.82	.82	.77		.77	.82			.77		.77	.77	.76		.70	.70	.70	.70			
30-30.9	.84	.84	.84	.79		.79	.84			.79		.79	.79	.78		.72	.72	.72	.72			.64
31-31.9	.86	.86	.86	.81		.81	.86							.80		.74	.74	.74	.74			.67
32-32.9	.88	.88	.88	.83			.88							.82		.76	.76	.76	.76			.70
33-33.9							.90							.84		.78	.78	.78	.78			.73
34-34.9							.92	1.32						.86				.80	.80			.76
35-35.9							.94	1.39						.88				.82	.82			.79
36-36.9							.96	1.40						.90								.82
37-37.9							.98	1.53						.92								.84
38-38.9							1.00	1.60						.94								.86
39-39.9							1.02	1.66						.96								.88
40-40.9							1.04	1.72						.98								.90
41-41.9							1.06	1.78														
42-42.9							1.08	1.84														

F.O.B. SHIP

*Posted by Union Oil Company.

MARKET SECTION

▼ ▼ CRUDE OIL PRICE QUOTATIONS ▼ ▼

(Continued from page 97)

Magnolia Petroleum Company Effective March 5, 1931

Below 26	.40	27-27.9	.42
26-26.9	.41	28-28.9	.43

From here to 40 and above gravity same schedule as above.

NORTH TEXAS

North Texas Crude in Wichita, Wilbarger, Archer, Northern Young.

All Purchasers

(Effective March 10, 1931)

For Ranger, North Texas, Mexia, Powell, Boggy Creek, Richland, Wortham, Currie, Moran, and Nocona crudes:

Below 29	$ .43	35-35.9	$ .57
29-29.9	.45	36-36.9	.59
30-30.9	.47	37-37.9	.61
31-31.9	.49	38-38.9	.63
32-32.9	.51	39-39.9	.65
33-33.9	.53	40 and above	.67
34-34.9	.55		

PANHANDLE

All Purchasers

(Effective March 10, 1931)

Gray County Crude

Below 35	$ .43
35-35.9	.45
36-36.9	.47
37-37.9	.49
38-38.9	.51
39-39.9	.53
40 and above	.55

All Purchasers

Effective March 10, 1931

Carson and Hutchinson County Crude

Below 35	$ .38
35-35.9	.40
36-36.9	.42
37-37.9	.44
38-38.9	.46
39-39.9	.48
40 and above	.50

WEST TEXAS AND NEW MEXICO

All Purchasers

(Effective March 10, 1931)

Winkler County	$ .40
Pecos County	.40
Lea County	.40
Crane, Upton, Howard, Ector, Ward Loving, Crockett, Mitchell, Glasscock Co.'s	.35

GULF COAST

(Posted by Humble Oil & Refining Company, The Texas Company and Sun Company)

Gulf Coast Crude will be classified as follows in fields designated below:

Goose Creek, Hull, Boling, Liberty, Orange, Pierce Junction, Raccoon Bend, Barbers Hill, Sour Lake, Spindletop, Sugar Land, West Columbia and Humble crudes:

"A" GRADE—All crudes conforming to the following tests:

Viscosity—Not less than 100 seconds at 100° F. Saybolt.

Sulphur—Not over .4%.

Beaume Gravity—Not over 25 at 60° F.

Cold test of distillates having a viscosity of 1000 seconds at 100° F, shall not be over 5° F.

"A" GRADE—$ .80.

"B" GRADE—Embraces all Coastal crude which does not meet the test for "A" grade crude:

All Purchasers

(Effective Jan. 14, 1931)

High Island	$ .75		
Grade "A"	.80		
Grade "B"			
Below 25	$ .69	33-33.9	.87
25-25.9	.71	34-34.9	.89
26-26.9	.73	35-35.9	.91
27-27.9	.75	36-36.9	.93
28-28.9	.77	37-37.9	.95
29-29.9	.79	38-38.9	.97
30-30.9	.81	39-39.9	.99
31-31.9	.83	40 and above	1.01
32-32.9	.85		
Jennings, La.	.80		
Markham (The Texas Company)	.69		

SOUTHWEST TEXAS

All Purchasers

(Effective March 10, 1931)

Refugio Heavy crude, below 25 gravity	.69		
Refugio Light crude:			
25-25.9	$ .71	33-33.9	.87
26-26.9	.73	34-34.9	.89
27-27.9	.75	35-35.9	.91
28-28.9	.77	36-36.9	.93
29-29.9	.79	37-37.9	.95
30-30.9	.81	38-38.9	.97
31-31.9	.83	39-39.9	.99
32-32.9	.85	40 and above	1.01
Mirando crude	$ .69		
Salt Flat crude	.60		
Darst Creek crude	.60		
Pettus crude	.95		
Luling	.45		
Corsicana, heavy	.45		

Determination of quality, deductions, adjustment for temperature, etc., on oil purchased in Texas, shall be in accordance with the rules and regulations of the Texas Railroad Commission, and on oil purchased in New Mexico shall be in accordance with the rules and regulations of the Corporation Commission of New Mexico.

LOUISIANA-ARKANSAS

All Purchasers Except Magnolia Petroleum Co.

(Effective March 10, 1931)

Pine Island District, Haynesville District, Bull Bayou District, El Dorado District, Rainbow District, Cotton Valley

Below 29	$ .43	35-35.9	.57
29-29.9	.45	36-36.9	.59
30-30.9	.47	37-37.9	.61
31-31.9	.49	38-38.9	.63
32-32.9	.51	39-39.9	.65
33-33.9	.53	40 and above	.67
34-34.9	.55		
Urania, La.	.75		
Bellevue, La	1.00		

Magnolia Petroleum Company, Effective March 10, 1931

Below 26	$ .40	27-27.9	.42
26-26.9	.41	28-28.9	.43

From here prices same as schedule above.

STEPHENS

Below 29	$ .54	31 to 31.9	.66
29 to 29.9	.58	32 and above	.70
30 to 30.9	.62		
Smackover	.45		
El Dorado, East Field	.70		
Bellevue	.45		

ROCKY MOUNTAIN FIELDS

(Salt Creek prices effective Mar. 5, 1931)

‡Salt Creek 29-29.9	.69
" " 30-30.9	.73
" " 31-31.9	.77
" " 32-32.9	.81
" " 33-33.9	.85
" " 34-34.9	.89
" " 35-35.9	.92
" " 36-36.9	.95
" " 37 and above	.98
Elk Basin (Effective Oct. 28, 1931)	.90
Grass Creek light	.90
Big Muddy	.65
Lance Creek	.98
Rock Creek	.66
Mule Creek	1.20
Rex Lake	1.10
‡Osage (Nov. 1, 1930)	.85
‡Cat Creek, Montana	1.25
Pondera	1.45
Sunburst, Montana	1.55
‡Hogback, New Mexico	1.40

‡Posted by Midwest Refining Co. Midwest also buys Grass Creek light and Elk Basin.

STATE CRUDE PRODUCTION TAXES

Oklahoma—Three per cent of gross value, less royalty interest.

Texas—Two per cent of gross value.

Louisiana—From four to 11 cents a barrel, depending upon gravity.

Arkansas—2.6 per cent of gross market value.

Montana—Two per cent of gross value at well.

Wyoming and New Mexico—Production tax based upon state and county assessments.

California—.66443 mills per barrel of oil produced and 17.39 cents per acre on proved oil lands.

▼ ▼ THE WEEK'S NEWS ▼ ▼

California Governor Urges End of Price Disturbances

Los Angeles.—Governor James Rolph, Jr., stands ready to help the oil producers and marketers with their problems, he told them in an address Thursday evening, March 5, at the twenty-fourth annual banquet of the California Oil and Gas Association, held in the Sala D'Oro of the Biltmore Hotel. The governor referred to price wars and production of crude in excess of market requirements as extremely bad business practices and urged the majors and independents to reach an understanding. He promised to appoint a practical oil man as head of the State Mining Bureau and claimed that under the old scheme it was impossible to find a director of natural resources who knew oil and gas problems, besides having a broad knowledge of the five other departments under his supervision. Governor Rolph spoke of the needs for a protective tariff and urged the industry to continue its fight along this line.

Herbert R. Macmillan, president of the association, addressed the meeting and urged the operators in general to use their influence in bringing to an end the price war now being waged. He said that a continuation of low gasoline prices will result in crude price reductions. Macmillan claimed that the present price war emphasizes the necessity for a modification of national and state anti-trust laws, so as to permit reasonable trade agreements under which prices can be fixed which would insure a fair profit and under which also the public would be protected against exhorbitant prices.

J. R. Pemberton of Petroleum Securities Company was toastmaster. The addresses were followed by a two-hour entertainment.

Wilbur Names New Committee To Study Economic Situation

Washington, D. C.—A survey of the supply and demand factors in the petroleum industry for the six-months' period beginning April 1 is to be made by a Voluntary Committee on Petroleum Economics appointed by Secretary of the Interior Wilbur, as chairman of the Federal Oil Conservation Board, at the request of the American Petroleum Institute, it has been announced. The committee consists of: E. B. Swanson, chief economist, United States Bureau of Mines, chairman; John W. Frey, Bureau of Foreign and Domestic Commerce; Martin Van Couvering, petroleum engineer, Los Angeles; Alfred G. White, National Industrial Conference Board, New York; and Howard Bennette, Western Petroleum Refiners Association.

Two reports, similar in character to the one projected, were made in 1930 by a volunteer committee consisting of J. Elmer Thomas, Fort Worth, Texas, chairman; Joseph E. Pogue, New York City; Ray M. Collins, Tulsa, Oklahoma; H. W. Lowrie, Jr., Denver, Colorado; and H. P. Grimm, Los Angeles. These reports or surveys were made as the result of a unanimous request by the board of directors of the American Petroleum Institute, and the data thus compiled served more or less as a guide to the industry, resulting, oil executives asserted, in more orderly production and a pronounced diminution of hitherto generally recognized wasteful and extravagant methods which the industry in recent years has sought to correct. The problem of estimating the crude oil requirements of the country was approached by the former committee through an analysis of the prospective consumption of gasoline and a translation of the gasoline demand into the domestic crude oil needed to provide the necessary gasoline.

Washington Seeks Agreement To Limit Petroleum Imports

Washington, D. C.—The working out of some plan of voluntary reduction of oil imports is receiving the attention of the administration, and negotiations are under way between Secretary of Commerce Lamont and leaders of the industry with a view to bringing about "a more harmonious relationship between imports and home production."

The matter received the attention of the president at the meeting with his cabinet March 6, at which time, it is understood, he was advised that practically all of the importing companies are willing to agree to a plan of this nature with the exception of Standard Oil Company (Indiana). It is expected, however, that within a few days Standard Oil Company (Indiana) will either express its acceptance of reduction or make clear its reasons for opposition, as yet unexpressed.

Acceptance of the plan has already been agreed to by the Mellon interests, Standard Oil Company of New Jersey and other importing companies, the two named declaring that they will go as far as they can in assisting the domestic producers.

Governors of the oil producing states are being kept in touch with the situation by President Hoover. It is believed here that some means of reducing imports to a ratio nearer that of domestic production can be worked out by agreement, to operate until congress next year has an opportunity to consider legislation for the relief of the industry.

Supporters of the administration, explaining the apparent inability of congress to give any relief during the session just ended, point out that neither the president nor his advisors had any objection to the imposition of an oil tariff, but feared that to bring a single tariff item before congress would result in opening up the entire subject through the imposition on the legislation of hundreds of amendments dealing with other tariff rates which are held by some to be unsatisfactory. It would, as a result, have been impossible to have enacted any tariff legislation whatever during the session and the only effect of the effort would have been to bring about a recurrence of the great uncertainty which prevailed during the period the 1930 tariff act was in process of enactment.

Next session, it is anticipated, it will be impossible to keep tariff off the floor, because the changed complexion

(*Continued on page 102*)

Officers American Association of Petroleum Geologists

To Direct Annual Meeting in San Antonio
March 19-21

DR. SIDNEY POWERS
President

He has been chief geologist for Amerada Petroleum Corporation since its organization in 1919, and was elected to head the association last year at New Orleans.

J. Y. SNYDER
Past President

An independent operator in Louisiana and Arkansas. Mr. Snyder has to his credit discovery of a number of important fields in that area.

R. D. REED
First Vice-President

Mr. Reed is chief geologist of The Texas Company in California, and president of the Pacific Coast section of the association. He formerly was located at Okmulgee, Oklahoma, as a consultant.

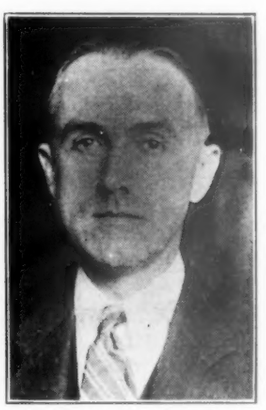
—Photo by Bachrach

FREDERIC H. LAHEE
Vice-President in charge of Editorial Work

Formerly professor of geology at Massachusetts Institute of Technology. Dr. Lahee is now chief geologist of Sun Oil Company, Dallas. He is now preparing a second edition of his handbook "Field Geology."

MARVIN LEE
Second Vice-President

Mr. Lee has been for a number of years a consulting geologist at Wichita, Kansas. He was formerly president of the Kansas Geological Society.



J. P. D. HULL
Secretary

His duties include direction of the various details of the association's activities and correlation of the work of its various committees, its publications of scientific papers, etc.

Personal Mention—Men You Know

▼ ▼ ▼

W. A. Jones, first vice-president and Charles A. Frueauff, general counsel and director of Cities Service Company are in Los Angeles, and H. L. Doherty, president, is expected this week. The officials are visiting California to continue their study of Richfield Oil Company's properties.

DOUGLAS SEMMES

Duoglas R. Semmes, retiring president of the San Antonio Geological Society which is host to the American Association of Petroleum Geologists which meets in San Antonio March 19-21. Dr. Semmes was educated at the University of Virginia (B.A., 1912, M.A., 1913) and came to Texas immediately following his Ph. D. from Columbia University in 1916, and worked for Producers Oil Company with Sidney Powers and Wallace Pratt. He was professor of geology at Texas A. & M., 1917, consulting geologist at Fort Worth, 1919, professor of geology at University of Alabama, 1919-20, assistant chief geologist, Cia. Mex. de Petroleo El Aguila, Tampico, Mexico, 1920-24, independent geologist, New York, 1925-27, associated with E. B. Hopkins, Fort Worth, 1927-28, manager Cia. Mex. de Petroleo, El Charro, Mexico, D. F., 1928-29, consulting geologist at San Antonio, 1930-31. He worked in Texas, New Mexico, Oklahoma, Wyoming and Alabama. Wrote petroleum possibilities of Alabama and Oil and Gas in Alabama (bulletins of Geology Survey of Alabama). He also done work in Mexico, Brazil, Colombia, India, Canada and Trag. Member Sigma Xi, American Association Petroleum Geologists, Societe Geologique Society of America, American Association for Advancement of Science, American Geographic Society and Texas Academy of Science.

Merle C. Israelsky was the featured speaker at the weekly luncheon of the Houston Geological Society March 10, giving a resume of Dallas geologists' discussion of East Texas sands.

Bradford M. Melvin has resigned as vice-president and counsel for Richfield Oil Company of California, and will devote his time to private practice in San Francisco.

Herschel Cooper, president, and other officers recently elected by the San Antonio section of the American Association of Petroleum Geologists will be installed into office March 23. The other officials are: L. W. MacNaughton, Amerada Petroleum Corporation, vice president; J. D. Hedley, Barnsdall Oil Corporation, secretary and treasurer; and Ed. W. Owen, Wentz Oil Corporation, member of the executive committee. D. R. Semmes, retiring president, also becomes a member of the executive committee, which is composed of the three active officers, the retiring president and one elective member. Cooper is consulting geologist of San Antonio.

C. E. Sampson has been appointed assistant manager of the Kettleman North Dome Association. He will also act as secretary and treasurer of the organization. Sampson was formerly connected with North American Oil Consolidated and General Petroleum Corporation. Offices of the association have been opened in the Richfield Building, Los Angeles.

J. U. Stair, for several years manager of the production department of Shell Oil Company of California, has been elected vice-president in charge of production, to fill the vacancy created by the resignation of William C. Reinhardt.

E. M. Bedford, assistant treasurer of Western Gulf Oil Company of Los Angeles, is spending his vacation in Oklahoma City and other Mid-Continent points.

J. Edgar Pew, vice-president Sun Oil Company, Philadelphia, visited the district offices of the company at Dallas late last week.

Blaine Johnston, superintendent of production for Simms Oil Company in the Smackover, Arkansas, district, has been transferred to Longview, Texas, to assume charge of the company's development program now getting underway in Gregg County.

Dr. Hans Stille, professor of geology and paleontology of the University of Gottingen, Germany, is visiting Houston in the course of an investigation of the salt domes of the Gulf Coastal region. It will be remembered that Gottingen is in the Province of Hannover, where oil production is obtained from salt dome structures very similar to those of Texas and Louisiana.

Among the foreign visitors in Los Angeles during the Oil Equipment and Engineering Exposition will be E. K. Andrau, C. D. Doornik, F. A. Kahlman, E. Koopmans, W. K. Lethbridge, T. J. Maagdenberg, A. Nauta, H. Schols, A. G. G. Schot, A. B. Schumaker, G. Tarrell, P. T. Van Adrichman, L. J. Van Dijk, H. F. Van Der Meer, V. J. Van Lint, J. A. W. in de Betouw Van Der Voort and L. R. Tilley.

E. P. HINDES

E. P. Hindes has recently been appointed chief geologist of Henry L. Doherty & Company in New York, and as such will be the executive head of the geological and land departments of the New York office. He will have direct supervision over all business pertaining to geological and land activities which may be handled in this office. His duties will apply to both oil and gas operations. His department will accumulate general information on petroleum and natural gas geology, and geological areas throughout the United States.

WASHINGTON SEEKS AGREEMENT TO LIMIT PETROLEUM IMPORTS
(Continued from page 99)

of congress, leaving the republicans without any decisive majority, will not enable the administration to head the subject off.

Meanwhile, however, officials of the administration are giving every evidence of a sincere desire to arrive at some plan which will give a measure of relief to the independent oil producers, and believe that reduction of imports offers the best vehicle for bringing this about at the present time.

Representatives of the Mid-Continent producers in Washington last week urged Secretary of the Interior Wilbur, chairman of the oil conservation board, to have the government call a conference of producers with a view to preventing a price-cutting war, following the Sinclair Oil & Gas Company price reduction, and to continue the present proration policy.

St. Clair Assigns Gasoline War as Cause for Crude Cut

Los Angeles.—If the present California and Pacific Coast gasoline war continues for a considerable length of time, the crude price structure will collapse to force an adjustment, L. P. St. Clair, president of Union Oil Company of California told stockholders at the annual meeting held in Los Angeles, March 3. He expressed the belief that out of the present chaos will come a stabilization of some sort. St. Clair insisted that settlement of the dispute and future of the industry are in the hands of the industry itself. E. W. Clarke, chairman of the board of directors, showed that in 1921 the average depth of wells drilled by the company was 3000 feet and the cost $26.70 per foot, while in 1930 the average depth was 5400 feet and the cost $26.66 per foot. No changes were announced in the board of directors, although the company only recently made several changes.

Three Papers on Program For Pacific Coast Section A. P. I.

Los Angeles.—The Pacific Coast District of the A. P. I. Division of Production will hold its annual meeting and dinner on Friday, March 20, 1931, at 6 p.m., at the Engineers Club, Los Angeles. The meeting will be presided over by District Chairman A. H. Bell, and the program will include election of officers and presentation of three papers.

A. F. Wilson, Standard Oil Company of California, will present a paper entitled "Recent Developments in Oil Well Foundations and Drilling Machinery." This is a subject which is extremely interesting at the present time due to the many recent developments in derrick and machinery design caused by the deep drilling and heavy pressures encountered at Kettleman Hills and other fields.

R. A. March, Shell Oil Company, will present a paper entitled "Design and Installation of Gas Traps and Vapor Systems," which will be followed by a paper prepared by P. S. Magruder, General Petroleum Corporation, entitled "Theoretical Consideration Involved in Multiple Traps and Vapor Recovery Installation." The subject covered by these last two papers is more or less interlocking and the discussion will be held jointly on the two papers. This subject is also interesting and should bring forth a lively discussion from the proponents of the two types of gas saving installation.

A charge of $2.50 per plate will be made to cover registration fees, preprinting of papers which will be distributed at the meeting, and incidental expenses.

Suggest State Limitations of Imports at Conference

Texarkana, Texas.—As the first step to be taken in restoring prosperity to the oil industry, representatives of governors of seven states recommended an agreement with major oil companies to limit production and importation of crude oil. Those in attendance at the meeting here represented the chief executives of Texas, Oklahoma, Louisiana, Kansas, California, Arkansas and Wyoming, having convened on a call from Governor Murray of Oklahoma.

They proposed that if agreements between the states and producing companies failed to curtail imports, legislatures undertake to control imports within the states. At the same time they suggested that anti-trust laws not be applied to a natural resource like oil or gas.

Hoover's Conservation Policy Gets Hearing in Supreme Court

Washington, D. C.—Arguments in the cases involving the president's oil conservation policy will be heard by the United States Supreme Court, April 13, under orders issued March 8 advancing the cases on the docket.

The suits involve the authority of the Secretary of the Interior to issue orders suspending oil and gas prospecting permits, the Supreme Court of the District of Columbia ruling that the secretary was without such authority, the decision of that court being reversed by the court of appeals, where it was held that the secretary withdrew the public lands of the United States from the filing of applications for permits by virtue of the power vested in the president. The actions were originally brought to compel the secretary to issue a prospecting permit under the leasing act of 1920 to M. McLennan, who filed application therefor on October 29, 1928. The lands covered by her application had previously been included in a prospecting permit which was cancelled by Secretary Wilbur.

Shreveport, Louisiana.—Location for a test on a geophysical high in NE NE Section 14-2n-11w, Vernon Parish, Louisiana, the parish immediately south of Sabine Parish, was made during the past week end by Smith Weir and associates. The location is on a block of 9000 acres in which Yount-Lee Oil Company is reported to have recently acquired a half-interest for $30,000 which sum will be used in drilling. The test will go to 4000 or 5000 feet. Geologists who once believed Vernon Parish off the Sabine Uplift now believe there are various noses extending off this to the south extending into Vernon Parish and south Sabine.

News From California Fields

BRAD MILLS, *Staff Representative, Los Angeles, California*

Kettleman Hills Offsets Source of Much Concern

Coalinga, Calif.—Pending a definite plan of action by the Kettleman North Dome Association, operators are arranging their offset plans as if they were going about their own affairs. This is a natural state of action, however, and preparations made just prior to the launching of the unit plan probably will be picked up by the association and carried out where offsets are absolutely necessary. It is known that drilling on fee land which offsets the association's property has caused both the inside operators and the embryo association plenty of worry, and it is natural that the first production obtained under the new agreement will come from such offsets.

With some 20 wells shut down over the Temblor zone, in accordance with the agreement expiring July 1, 1931, and as many more drilling, the North Dome will become the center of potential production. There is still a belief in some quarters that the field will not be held definitely in check, since offsetting is considered legitimate where operators outside the plan persist in developing their leases.

The state gas saving law seems to be closing in on operators wasting gas on the North Dome, but it is admittedly slow in checking the flow of dry gas to the air. There is a possibility that production will be held in check through provisions of this bill.

Standard Oil Company has used its influence to curtail drilling operations, but there is a doubt whether it will allow unnecessary drainage of its leases by offsetting companies. This company rarely ever fails to become a party to cooperative curtailment, but it is equally quick to protect its acreage when excessively offset.

Petroleum Securities Company is drilling at 5300 feet in Burbank 1, a test on the Middle Dome. Standard Oil Company is drilling at 1300 feet in No. 29V, an offset to Burbank 1.

Kern County Wildcat Work Above This Time Last Year

Bakersfield, Calif.—Kern County, after taking a back seat at irregular intervals during the past two years in favor of Santa Barbara County, is again leading the field in wildcatting activities by a good margin. Discovery of the Weed Patch field, drilling of the deepest well in the world and completion of a good well in the deep zone at North Belridge, gradually stimulated activity after a quiet period of nearly a year. The number of wildcats and semi-wildcats is larger than the average number during the early months of 1930. Kern County rarely fails to have at least one critical wildcat test, and three at a time are not unusual. The county is large enough to include both sides of the San Joaquin Valley for a long way, and the fringes offer ideal wildcatting ground. Discovery of the Fruitvale and Weed Patch fields has opened a large district to drilling. The old theory that the bed of the valley would not produce oil has been completely dissipated, and with the change in ideas has entered a great district. Lost Hills and North Belridge have also stimulated activity, where there is admittedly only remote possibility of production in the Temblor formation. Further improvement in the heavy oil market will be reflected in more widespread activity, even if a larger number of wells are not drilled at any one time.

Huntington Beach Deepening Campaign Due Early Start

Huntington Beach, Calif.—Huntington Beach is about to witness a small deep drilling campaign before a deep well is completed. Rumors and tentative plans are being crystalized into more definite action, and several wells will be started within the next few weeks. Wilshire Oil Company, discoverer of the Buckbee zone at Santa Fe Springs, is setting boilers to deepen Huntington Beach 5 from 4000 feet and is considering the redrilling of seven additional wells. A. L. Fietz has made a new location for a deep test, and does not deny it, as a few have done. W. E. McCaslin is drilling at 7300 feet in No. 17, now the only active well below 7000 feet. The formations are checking fairly close to those found in the original deep test. Superior Oil Company's Fee 1 is still standing at 7491 feet. The mystery surrounding this test is largely responsible for the present activity toward deeper development. It is known that oil and gas gas were found in cores taken from this well, but there is a possibility that commercial production will not be developed.

North Belridge Limits Will Be Defined by Present Tests

Bakersfield, Calif.—The trend of production and the probable producing area of the North Belridge field should be determined by completion of present drilling wells. It already seems assured that the Temblor formation will be productive on a narrow strip, and many of the wells originally thought favorably located probably will prove to be too far down on the dips to get production.

Richfield Oil Company has abandoned Belridge 1, Section 22-27-20, at 6639 feet, following a series of production tests at various levels below 5700 feet. Abandonment of this well was not a surprise, but it was regarded at one time as a very promising wildcat. The well was located about one and one-half miles north of the producing limits of the shallow zone, and it is possible that the deeper sand may produce over about the same area.

Union Oil Company is coring in the Temblor formation at 5255 feet in Belridge 17 and this well undoubtedly will be the second producer in the deep zone. The sand is showing oil and gas and the well is definitely located on the structure.

Ohio Oil Company is having a full share of trouble with Bloemer 1, which may prove to be off structure. Certainly

this well is much lower than the discovery well, which was completed considerably above 5840 feet, the depth at which Bloemer 1 is being tested.

Belridge Oil Company's Fee 15 has increased its flow to 4750 barrels of 42 gravity oil and 21,000,000 cubic feet of gas, after starting off with an initial flow of 2800 barrels. This is one of the most convincing discovery wells ever completed in a California field. This company is drilling five additional wells and should soon have a large production of light oil.

Of the 15 active wells in and near the field, several probably will prove to be off structure. Even with a small acreage, the field could develop into one of the most important in California.

Water Causing Trouble in Two Lost Hills Deep Tests

Bakersfield, California.—The two deep tests in the Lost Hills field trying for production in what is supposedly the top of the Temblor formation, but water has caused trouble in both wells. George F. Getty's Lincoln Drilling 1-A, which flowed gas 10 days ago is being tested at 3770 feet, following a threatened blowout. Nine-inch casing was cemented through perforations just above the upper water stratum, after placing two packers to shut off the top water which was expected to bother a lower cementing job. The well has been rigged completely for a production test, with gas traps and flow lines resembling those used in proven fields installed. Universal Consolidated Oil Company is ready to make another production test in No. 49, a deep well standing cemented at 5280 feet. This well was tested at 5000 feet, but the mystery of a large flow of water was solved upon deeper drilling. The water proved to be coming from the formation. General Petroleum Corporation is rigging up at Lost Hills 1301, an offset to George F. Getty's Lincoln Drilling 1-A. This field has been regarded as a probable producer in the Temblor formation, but the first tests have not looked promising.

Los Angeles.—Wilshire Annex Oil Company will drill a well on the Potrero Country Club lease, which was quitclaimed some time ago by Associated Oil Company. The well is located on the northeast quarter of Section 24-2-14. The Potrero field has a very interesting history and has been one of the most expensive districts, per barrel of oil recovered, in the Los Angeles basin. Associated Oil Company succeeded in completing the discovery well southeast of the Potrero Country Club late in 1928 but never made its subsequent operations pay. A jump to the Inglewood townlot district resulted in the development of another small sector. The country club tract lies about midway between the two small developed areas.

Long Beach, Calif.—The number of active drilling wells in the Long Beach field is smaller than that recorded at any time since the latest wave of deep development swept over the district. There is every indication, however, that the trend of field work will not continue downward further. Many idle wells will be started again as soon as definite assurance is given that new crude will be taken without question. Completion of a good well at 5200 feet in the western part of the field may cause a shift of operations toward this district. Heretofore, this level had been passed up for much deeper formations.

Sharp Decline Noted in Playa del Rey Activity

Los Angeles.—A comparison of the present number of drilling wells at Playa del Rey with that of six months ago graphically shows what may happen to a townlot field on short notice. There are now 24 active drilling wells, as compared with three times as many at the beginning of the year and more than five times as many six months ago. It is true that many of the drilling wells of last fall are now found in the producing column, but the absence of new locations in the townlot district largely caused the decline. There are nearly as many idle wells as active projects, the edge tests stopping at the first definite sign of a decline. The deep zone in the southwest part of the field is attracting most attention and the occasional new locations are being made in this sector. Since the eastern limit of the field has not been definitely defined, there is a possibility of considerable activity over a limited area. The present level of development may continue for some time. Production has dropped to 28,000 barrels and a gradual decline is expected. The townlot district has settled rapidly and many of the wells completed with a small initial probably will not pay out at all. Many of the edge wells are showing water, but most of the best inside producers are still pumping clean oil.

Ventura, Calif. — Associated Oil, Company has completed Lloyd 95 in the Ventura Avenue field with an initial production of 3300 barrels from 7375 feet. The well started flowing at an even higher rate, but gradually settled to a lower figure. Such a completion at this stage of development is unusual and may be accounted for by the conservative development of the field over a period of several years. Gas production was only 4,000,000 cubic feet, an unusually low volume. Associated Oil Company and Shell Oil Company largely control the Ventura Avenue field, and have developed it along conservative lines. These two companies are now drilling about 20 wells and have maintained a similar schedule for more than two years. The latter has been successful with shallow completions between 4000 and 5000 feet, but Associated Oil Company has held to its deep drilling program.

Bakersfield, Calif.—Shell Oil Company is making a production test in Williams 1, a wildcat test in the Semitropic district and the deepest well in the world, but the 9702-foot shows little signs of becoming also the deepest producing well in the world. The fluid was swabbed to 5000 feet, but after standing for a few hours rose nearly 500 feet. The test was largely to determine whether a shutoff had been effected with the 5¾-inch casing at 8575 feet, but was also a form of open hole production test. Even a small well at this depth would be an important development. More than 1000 feet of zone below the final shutoff was cored and much of this formation looked promising. The well showed some gas and oil but the great depth of the hole and amount of fluid were handicaps.

Los Angeles.—After obtaining a small production in Abacherli 1, a wildcat test nine miles east of the Olinda field, Western Gulf Oil Company will deepen the well from 2366 feet. After swabbing the test for a short time, it was evident that it would not flow. The oil recovered was 21.6 gravity but the fluid entered the hole so slowly that the well was soon swabbed dry. A string of 5¾-inch casing was landed on bottom, with 2½-inch tubing at 2180 feet. The action of the well was not radically different from that of other tests drilled in the district, but the formation showed more life than some of the earlier wells.

Oklahoma--Kansas Field Notes

FLOYD SWINDELL, *Staff Representative, Tulsa, Oklahoma*

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Increase of 56,100 Barrels Daily at Oklahoma City

Tulsa.—Estimated daily average production for Oklahoma increased 56,100 barrels over the week before when it reached 501,650 barrels during the past week. All of the increase came from the Oklahoma City pool which had been far below normal for the preceeding seven-day period. Production from the Oklahoma City pool hit a new high for 1931 when on Thursday, March 5, 108 wells produced 156,978 barrels. The all time high for the pool was approximately 180,000 barrels, a one-day run in May, 1930. Production for the past week averaged 128,220 barrels daily. Considerable confusion existed in regard to the corporation commission's order regarding the amount of production which would be allowed under-produced and even wells. One operator misconstrued the order and produced full allowable on all even wells where the order had comprehended full allowable production from under-produced wells and two-thirds of allowable for all others.

The storage situation has shown a progressively better condition since the latter part of 1930. Earlier in the year many wells continued to fall farther behind in allowable production because of full lease storage and limited outlet. As of December 22, 1930, the field umpire reported 1,202,000 barrels in all classes of storage. On February 1, this had decreased to 876,288 barrels, a decidedly optimistic trend in view of the potential of more than 5,000,000 barrels daily for January. Storage figures as of March 1 are not as yet available but from an inspection of pipe line runs and daily production it is believed that the situation will show even further improvement over February 1.

Despite the general slump in activity the north end or townlot sector of the pool is showing marked signs of life in the form of lease blocking. During the week ending February 28, the city commission issued permits for drilling seven wells in the U-7 zone and several applications for permits are now on file. Blocks in this area comprise an aggregate of small irregular tracts of from one city lot to parcels of two and three acres. Early in the history of townlot development in the pool even the major companies were not adverse to drilling on a scale of one well to one or two city lots. This practice, however, does not seem to be conducive to profitable operation since wells cost upward of $150,000 exclusive of leasehold costs.

Phillips Petroleum Company completed the only well of gusher class when Davis 1, NE SE NW Section 10-11n-3w, came in for an initial flow of 7426 barrels in three hours and 50 minutes. Top of the Wilcox was encountered at 6317 feet and penetrated to 6490 feet still in sand. Anderson-Prichard et al's Gibbons 4, EL SE NE Section 2-11n-3w, did only 1362 barrels in four hours from sand topped at 6350 feet and penetrated to 6447 feet in sand. Gas was estimated at 18,000,000 cubic feet a relatively low volume for this part of the field. Oklahoma City Petroleum Company's Lively 1, NE NW SE Section 15-11n-3w, on the southwest edge of the pool, was a disappointment when it produced only 540 barrels the first two hours from 45 feet of Wilcox sand topped at 6445 feet. Total depth is 6493 feet, three feet below the base of the sand. The productive formation was encountered comparatively low on structure and even though the well showed signs of bridging, it is not likely to produce at a rate similar to other wells in the section.

Four new starts are listed among the week's activities in the form of building or completed rigs. T. B. Slick Estate's Terminal 1, 760 feet west of the east line and 1075 feet north of the south line of NW Section 3-11n-3w, is building rig; Anderson, Kerr et al's Jones 1, 840 feet south of the north line and 315 feet east of the west line of NW Section 10-11n-3w, is a completed rig; Watchorn Petroleum Company's Traders Compress 1, 1060 feet north of the south line and 1090 feet west of the east line of SE Section 34-12n-3w, and Westgate Oil Company's Carey 2, 930 feet south of the north line and 1140 feet east of the west line, of SE Section 34-12n-3w, are completed rigs.

Voshell Pool Contributes to Kansas Production Drop

Wichita, Kansas.—Daily average production for Kansas took a further drop during the past week when the estimate was 112,115 barels. The Voshell pool, in McPherson County, contributed most of the decline through a continued decrease in production from leases which have no regularly established outlets. Upon removal of proration regulations early in February of this year, production shot upward overnight and all available storage was filled within a few days. Since that time the pool has accounted for most of the decrease in production for the state. The Ritz area in the same county, although the center of activity for the whole state, is being prorated effectively through holding production to pipe line outlet which is about 6000 barrels daily. Little, if any, oil is being removed by tank car as would be expected in an area of such widely scattered development and with potentials far in excess of the market demand through the pipe lines.

Activity in the Ritz area was confined to new locations and drilling, there being no important completion during the past week. Shell Petroleum Corporation is probably getting the biggest drilling play that any company ever obtained on a relatively small amount of cash through the "farming out" of leases in the Ritz area. Several important completions were made in the pool at a time when Shell Petroleum Corporation was not anxious to conduct an extensive campaign, although it had extensive blocks covering the most prospective territory. Insistent demands by independent operators led to the practice of assigning interests in leases for the drilling of wells, not a new thing to the industry but perhaps carried out on a larger scale than has been customary. A large per cent of the tests now under way are on acreage originally owned entirely by Shell Petroleum Corporation but recently assigned on drilling agreements.

Youker et al are drilling below 3400 feet in Sellers 1, SE SW SW Section 19-19s-1w, after getting a show estimated at 40 barrels of oil and 1,000,000 cubic feet of gas in chat

at 2900 feet and in Mississippi lime at 3285 feet. Stearns and Streeter et al are preparing to drill deeper in Blair 1, NWc Section 32-19s-1w, after having an estimated 4,000,000 gas at 2971 feet in chat and oil and water at 2990 feet. It will be drilled to Viola lime pay.

Gypsy Oil Company may decide to leave tools in Coleman 1, CSW NE Section 25-17s-25w, prominent wildcat test in western Ness County. The company has had a fishing job at 4160 feet and so has been unsuccessful in getting a nibble. The test is not looking as good as was expected and may be abandoned before completing the fishing job.

Another test which rated attention during the last week in February but is now virtually assigned to the dry hole column is that of Langston et al's Sudendorff 1, NE NE SE Section 30-14s-2w, in east central Saline County. A showing estimated at one barrel per hour was encountered at 3265 to 3270 feet in Viola lime. Deepened to a sandy phase at 3424 to 3444 feet brought a hole full of water and it will very likely be abandoned instead of plugging back to upper sands.

Texas Company Starts Test Southwest of Robberson Pool

Tulsa.—The Texas Company has staked location for King 1, SW NE SW Section 31-1n-3w, about two miles southwest of the old Robberson pool and a half mile northwest of the town of Tussy in southwestern Garvin County. It is a west offset to Magnolia Petroleum Company's King 1-A which made 45 barrels initially from sand at 3405 to 3419 feet.

Merrick, Johnson, and Bunn are shut down waiting on cement to set in Johnson-McGill 1, SW SE SW Section 17-4s-2w, third recent test between the Healdton and Hewitt pools in Carter County. The test is of interest both because of its location and because of the method of drilling.

For a number of years a synclinal condition was thought to exist between these two major structures and nothing but water was expected from the Healdton and Hewitt sands with a likelihood of similar structural condition in the upper formations. The well is being drilled with a relatively new type of core drill which permits careful coring of all formations and makes possible the setting of casing of sufficient size for producing should any formation reveal oil in commercial quantities. In the present test operators have set three-inch casing at 1469 feet after coring sands showing oil at 1189 to 1207 feet, 1285 to 1300 feet, 1469 to 1510 feet, and 1720 to 1742 feet. Total depth is 1800 feet.

Tulsa.—Hivick and Rock have resumed drilling in Davis 1, CNW SW Section 4-11n-26w, westernmost test in the state in southwestern Roger Mills County. The old total depth was 2840 feet and at last report the well was being drilled at 2950 feet. The present operators took the test over at the time that drilling was resumed. One other test is drilling in the county and another operation is still a rig. Little is known of the conditions in this county. It lies near the bottom of the Anadarko Basin and known producing horizons in other areas should be found at great depths if present at all in Roger Mills County. The few wells that have been completed were drilled with the hope of locating shallow production similar to that in the Sayre pool of Beckham County which borders on the south. Every test which reaches 3000 feet in this area is especially interesting because few have penetrated that deeply into the Permian series which cover the surface and attain a maximum thickness in the Anadarko Basin.

Operators Marking Time In Southern Oklahoma

Tulsa.—Although the major activity in southern Oklahoma is centered in the Tatums pool in Carter County, operators in that area are marking time and few locations are being made except through offset requirements. New price schedules posted during the past week reduces the price of Tatums crude to an average of about 42 cents per barrel.

Magnolia Petroleum Company completed Mose Dickerson 4, SE SE NE Section 24-1s-3w, for an initial 24-hour gauge of 826 barrels on the swab. Production is coming from sands logged at 1931 to 2006 feet. Total depth is 2055 feet in shale. Carter Oil Company, Ed Cox and Jake L. Hamon's Hooks 2, NE SE NE Section 24-1s-3w, first location north of Dickerson 4, swabbed 1610 barrels of oil the first 24 hours from sands logged at 1842 to 2005 feet. Both completions are located on the east edge of the pool and will encourage development in that direction in addition to that anticipated to the southeast. All of the pools in this part of the state have a general northwest-southeast strike. Completion of wells to the southeast in section 31 and 32-1s-2w assure further development in that direction over a distance of more than a mile. Carter Oil Company has staked location and is moving in derrick for Paul Robb 1, NW SW NW Section 19-1s-2w, east offset to Carter, Cox and Hamon's Hooks 2. This will be the northeasternmost test in the pool. The Texas Company is rigging up tools for Eaves 6, NE SW SW Section 24-1s-3w, south offset to C. L. Anderson's Eaves 8, which was recently completed for 490 barrels on swabbing test.

Amos Drilling Company's Hooks 2, SW SE SE Section 13-1s-3w, on the northeast edge of the pool and offsetting the company's Hooks 1, is drilling and coring around 2000 feet. Magnolia Petroleum Company is making a real deep test of R. F. McCrory 1, SE SE SE Section 10-1s-3w, slightly over a mile northwest of the extension. This test was plugged back from 3520 to 2680 feet but sands logged at 2353 to 2383 feet failed to yield commercial production. Latest reports show the well to be drilling below 3840 feet.

Dallas, Texas.—Magnolia Petroleum Company has resumed storing crude in Oklahoma steel tankage after having registered a total withdrawal of 1,894,828 barrels during 1930, or at rate of about 5000 barrels daily, and during February oil backed up in its Oklahoma tanks at average rate of 9998 barrels daily. During the preceding month oil was run to storage at average rate of 3716 barrels daily. At the close of February, Magnolia Petroleum Company was credited with having 6,095,273 barrels on hand in Oklahoma. The company continues to maintain normal crude shipments from Gulf Coast terminals for tanker movement to Atlantic Coast refineries, having shipped 772,541 barrels of this commodity in February.

Tulsa.—Wilright Gas Company and Haynes Drilling Company have finished running 5 3/16-inch casing in Mississippi lime at 3850 feet in Wildgrube 1, NE NE SW Section 14-27n-1e, wildcat test six miles east and a half mile north of Blackwell in Kay County. Casing is set 25 feet off bottom. This test attracted attention several weeks ago when it had 500 feet of oil in the hole from Bartlesville sand and was heralded as an important find in that horizon. Production from the Bartlesville proved small and drilling was continued to the Mississippi lime to test for Hunton production.

Proration in Older Areas of Texas Probably to Continue

Fort Worth, Texas.—Continuation of proration enforcement in all Texas and New Mexico fields now operating on a restricted production basis is reasonably secure regardless of the disturbing market influence arising from the wide-open drilling and production campaign taking place in East Texas. Proration in these older areas has been accepted by operators even though crude purchasing agencies have not kept faith in maintaining prices, and only three producing units have utilized the protection of the courts to escape the production restrictions required by the so-called state-wide proration order of the Texas Railroad Commission.

Proration as now carried out in the older sections of Texas offers some striking contrasts as to variance in restrictions placed on production by the crude purchasers. The accompanying table contains official proration figures as compiled by each of the umpires, and average daily crude yield per well by fields and districts varies from 2.94 barrels in Central West Texas to a high mark of 223.19 barrels daily per well in the Yates field. The latter has the largest production allowance of any field in the state, while Central West Texas is prorated down to a level that potential is disregarded and only marginal allowances apply. These allowances range from four to 14 barrels daily per well according to depth.

North Texas as a unit is assigned a production quota of 56,714 barrels daily during the ensuing period for 14,910 wells, or an average of 3.8 barrels daily per well. The New Castle district, Young County, is a semi-flush area that has been allotted a high quota because of the high potential, and the average allowance per well during the current period is 42.93 barrels daily, while the balance of the shallow belt in north Young County has an average quota of only 3.89 barrels daily per well. The rest of the North Texas district, with 13,673 producers, will average 3.39 barrels daily per well in sharing in the 46,380-barrel market nominated by purchasers.

Texas Panhandle is drifting nearer its assigned proration allowance of 40,000 barrels daily, but still averaged above 51,000 barrels daily. This district has won over many operators to the proration movement since proration leaders succeeded in obtaining pipe line connections for producers that could not obtain relief through other means. However, the introduction of new crude prices this week whereby the top grade in Gray County is only 55 cents and limited to 50 cents on Carson and Hutchinson crudes is certain to have a discouraging influence on adherence to proration in this district.

Howard-Glasscock County sustained a drop of 6311 barrels in production allowance beginning with the March period as result of Cosden Oil Company and Shell Petroleum Corporation having curbed their purchases. Under the new schedule this district is limited to an average of 39.41 barrels daily per well, with a price of 35 cents per barrel in effect.

Van field advanced from 30,000 to 35,000 barrels daily beginning March 1 on production allowance, thus permitting an average yield of 165.06 barrels daily per well.

A meeting of operators in the Darst Creek and Salt Flat fields has been scheduled for the latter part of the current week to take action on curbing the allowable production in each, as the principal purchasers are confronted with major drilling programs and possibly a large volume of flush production in East Texas.

Although the Hobbs field, New Mexico, is prorated to a small percentage of its accepted potential, the average daily output per well is second to the Yates field, and during the current period amounts to 220.62 barrels daily per well.

Proration Data on Texas - New Mexico Fields As of March 1, 1931, with Exceptions Noted

	No. Wells	Official Daily Pot'l Production	Maximum Daily Prod. Allowance	Percentage of Pot'l Prod. Allowed	Daily Average Yield per Well
TEXAS PANHANDLE—					
Gray County	754	98,466	26,497	26.89	35.12
Hutchinson County	920	26,272	8,691	33.08	9.45
Carson County	237	12,938	3,367	26.02	14.21
Moore County	22	3,381	1,044	30.88	47.45
Wheeler County	43	711	407	57.24	9.46
Potter County	1	7	2	28.57	2.00
Total	1,977	141,775	39,990	28.21	20.23
WEST TEXAS—					
Yates	401	5,508,170	89,500	1.62	223.19
Crane Upton	600	49,034	18,658	38.05	31.09
Howard-Glasscock Dist.—					
3000-foot wells	92	15,411	5,725	37.15	62.23
2500-foot wells	53	10,095	3,276	32.45	61.81
2200-foot wells	85	44,291	8,273	18.68	97.33
1800-1300 ft. wells	301	8,168	3,651	44.69	12.13
Total	531	77,965	20,925	26.84	39.41
Ector County	79	25,762	6,115	23.74	77.41
Winkler County	534	113,615	60,000	52.81	112.36
Total	2,145	5,774,546	195,198	3.38	91.01
CENTRAL WEST TEXAS—					
All fields	[1]9,001	47,332	26,430	55.84	2.94
NORTH TEXAS DISTRICT—					
New Castle District	141	20,179	6,053	29.99	42.93
N. Young (Misc.)	1,100	6,475	4,281	66.12	3.89
N. Texas Dist. (Misc.)	13,673	71,140	46,380	65.20	3.39
Total	[2]14,914	97,794	56,714	57.99	3.80
CENTRAL EAST TEXAS—					
Van	[3]212	418,358	34,992	8.36	165.06
SOUTHWEST TEXAS—					
Darst Creek	257	152,201	30,000	19.71	116.73
Salt Flat	[4]326	17,770	16,000	90.04	49.08
Pettus Townsite	[3]19	6,102	4,500	73.74	236.84
NEW MEXICO—					
Hobbs	142	1,122,963	31,328	2.79	220.62

[1]All wells limited to 4-8-14 barrels marginal allowance.
[2]Last re-gauge for potential taken January, 1931.
[3]Potential through 11/16-inch choke.
[4]Effective February 17 to May 18, 1931.

Price Cut Apparent Effort To Influence Eastern Texas

Fort Worth, Texas.—Sacrifices voluntarily accepted by oil producers in older fields of Texas in adopting proration as being the surest course to follow in warding off price reductions proved futile during the past week when the lowest prices in the history of the most of these fields were introduced by purchasing branches of Standard Oil units. The collapse of the price structure occurred in the face of orderly proration in these older fields, and apparently represents a desperate attempt to bring additional pressure to bear on East Texas operators who have refused to curb drilling and production. East Texas operators escaped the price cut to the extent that none of the larger purchasers have posted a schedule, while generally each producer accepts the best offers obtainable on spot sales and contracted deliveries. This 38 to 40 gravity oil has been selling lately at a price range of 40 to 45 cents per barrel at the well, but a 10 to 20-cent price reduction is anticipated before the end of the month, as crude from older fields are on a competing basis, considering transportation costs, under the revised schedule.

East Central Texas Field Notes

H. H. KING, *Staff Representative, Fort Worth, Texas*

Kilgore Potential From Ten Wells Above 100,000 Barrels

Tyler, Texas.—A record of 10 oil completions and all rated at 10,000 barrels and better daily has been acquired by the Kilgore field since the drilling in of the discovery at the close of 1930. Although actual production is being held to 30,220 barrels daily, this field can produce 100,000 barrels of oil daily as soon as transportation facilities become available, as evidenced by the steady flowing performance of the few wells that have been provided with means for making heavy oil withdrawals. Rapid appearance of high temperature recordings on the flow lines after the wells have been thrown on nearly open flow has not resulted in the expected encroachment of salt water, and operators are accepting the abnormal temperature as just being a peculiarity. Some wells have developed a high temperature of 138° at the casinghead, with no adverse affect, while on the other hand this feverish condition removes paraffin troubles that are already a problem in the Joiner field to the south. None of the big producers in the latter field register abnormal temperatures.

Magnolia Petroleum Company joined the ranks of East Texas producers at the close of the past week by completing Della Crim 1, located on the south side of the Kilgore field, flowing 650 barrels high gravity oil during first hour test through casing and 2½-inch tubing, which was swung in the hole at 3697 feet, or 15 feet off bottom. The flow was then pinched to about 100 barrels daily, pending completion of Magnolia Pipe Line Company's trunk line extension into the district. More than 15 miles have been welded on this line, and it will likely be ready for service before the close of the month. Approximately 24 feet of oil sand was logged. The company has erected 18 1600-barrel tanks at the well to accommodate the production while awaiting pipe line connections.

Oil sand thickness in the Kilgore field was found to be 42 feet in Humble Oil & Refining Company's Ben Laird 1, which cored sand at 3605-3647 feet. A string of 2½-inch tubing was swung in the hole at 3633 feet after landing a 5-3/16-inch liner below the seven-inch casing, which was cemented on usual caprock at 3598 feet. This test will be completed early in the week.

Cordova Union Oil Corporation-W. E. Duffey and W. C. and Clarence Nelson's C. O. Christian 1, an east offset to Magnolia Petroleum Company's producer, was completed late last week making 202 barrels oil per hour through 2½-inch tubing from sand at 3679-84 feet, but had to be shut in for lack of a connection. These operators are to drill five tests on their 34.91-acre lease, and each own a quarter interest in the property. Federated Oil Company's Laird 1, which was completed March 1 making 210 barrels per hour through ¾-inch choke from sand at 3624-54 feet, had to be shut in for lack of tankage and pipe line connection. Humble Oil & Refining Company's Crim 3 was completed making 450 barrels oil per hour through one-inch and 5/16-inch chokes from sand at 3690-3720 feet. The latter is flowing into the same tank battery as Crim 2, and both yielded 10,125 barrels of oil during 24-hour period ending 7 a. m. March 7, and 6330 barrels the next day. Crim 3 tests 90 degrees temperature, and Crim 2 130 degrees, but the temperature on Crim 1, the discovery well of the field, is averaging 122 degrees while pinched to between 2500 and 3000 barrels daily.

An average yield of 10,500 barrels daily has been maintained during the first eight days in March by Ed. M. Jones and Houston Oil Company's W. R. Crim 1, which is registering about 104 degrees temperature at the separator. Houston Oil Company is handling this oil via tank cars, and is also taking the output of its partnership well with H. R. Smith.

Casing has been cemented in Burton Drilling Company and Sabine Syndicate's E. B. S. Florey 1, which was reported last week as having assured more than a mile west extension for the Kilgore field by flowing oil on drill stem test from sand at 3720-39 feet. A crooked hole may account for a portion of the difference in depth of this outpost test with wells in the field proper, but it is known to be somewhat lower on structure. The fact that it did not show water on the preliminary test would indicate that water hazards are far removed from the high points of the field. Sun Oil Company controls the bulk of the acreage to the north and west of the Burton test, and acquired more during the past week.

EAST TEXAS CEMENTING COSTS

In the estimate of the cost of drilling and completing a well in the East Texas Area carried on page 31 of the March 6, 1931, issue of The OIL WEEKLY it has been called to our attention by the Halliburton Oil Well Cementing Company that the cost of cementing should be $300.00 rather than $175.00 as indicated in printed tabulation. The charge of $300.00 includes $75.00 for the surface string and $225.00 for the final string.

Rusk-Gregg County Shipments Near 100,000 Barrels Daily

Tyler, Texas.—Passing of the 100,000-barrel mark on daily production in the Rusk-Gregg County district is just a matter of a few days, or possibly a week in the offing. The district started the current week off with an actual yield of 80,265 barrels from 35 wells on production, with eight additional completions dead, and two big producers shut in entirely for lack of a market outlet. There have been 45 successful oil completions in the two counties, and no failures within the likely zone of production.

Difficulty in obtaining pipe line and market relief centers on the Kilgore field, where tank car racks of Humble Oil & Refining Company and Houston Oil Company are handling a combined total of about 30,220 barrels daily, with no room available for Federated Oil Company and Cordova Union Oil Corporation et al to share in the outlet with their big producers, which have been shut in since completion. Humble Oil & Refining Company has elected to continue tank car shipments to Baytown at a freight rate of 11 cents per 100 pounds rather than to wind up work on its nearly completed trunk line. The latter is shipping an average of 10,000 barrels of oil daily, and this rail traffic is contributing to the growing congestion on the single railroad that

now serves the Joiner and Kilgore fields. Houston Oil Company is handling the output of the two part interest wells held with E. M. Jones and H. R. Smith, and is also giving 1000 barrels of daily relief to Karona Oil Company and John W. Olvey et al. The latter is at work on a private gathering system that will extend to a tank car rack on the I.&G.N. Ry. about two miles southwest of. Longview Olvey and associates plan to erect a 5000-barrel refinery near Kilgore, and also have arranged to dispose of a large volume of crude with the Shreveport-El Dorado Pipe Line Company, which is being reorganized as the Atlas Pipe Line Company. Marine Corporation, Dallas, is also planning to erect a gathering system and car rack in the Kilgore field in order to assume a market for its expected production.

Drainage of oil from the Woodbine horizon in the Joiner field is beginning to reflect in the daily output of a number of wells that have been on steady production for the past several weeks. This area has comparatively few big caliber wells, and requires more scientific handling to maintain production than the other fields. Paraffin accumulation in the 2½-inch tubing and 6⅝-inch casing is responsible for sharp decline in natural flow of a number of wells, and in order to partially eliminate this source of trouble some of the operators are flushing their wells by turning the flow into the pits for 15 minutes or more daily, while others run swab or agitate.

Haynes Drilling Company, Shreveport, is setting the pace on production for single operators in the Joiner field, having stepped up the output of its two completions to 9000 barrels towards the close of last week, with both wells flowing into the same battery. This oil is being sold to Sinclair Refining Company on a 200,000-barrel contract at flat price of 45 cents per barrel at the well.

Field Operations in New East Texas Area

RUSK COUNTY OPERATIONS

Extent of field operations in Rusk County is illustrated by the following table that lists each operator and status of operations:

Operator—	Lens.	Derricks & Rigs	Active Tests	Total
Geo. S. Anderson & Cox		1	2	3
W. D. "Andy" Anderson et al		1	1	2
C. Andrade-Imperator Oil Corp.		1		1
Babcock-Gordon Oil Co.	1		1	2
Ball Oil Corp. & Malone		1		1
Nick Barbare (UOG&M Co)	1		1	2
Bill & Dave Oil Corp.			1	1
H. L. Blackstock et al		1		1
Harry W. Bleam et al		1		1
British-American Oil Co.	1			1
H. L. Brown-Hill et al		1		1
Burton Drlg. Co. (Sabine Synd.)			2	2
Bunte et al		1		1
Capps-Smith & Anderson et al			1	1
Carolyn Oil Corp.	1			1
Roy I. Carter (C. P. Oil Co.)	1	1	1	3
E. L. Chapman et al		1		1
L. W. Collender et al		1		1
Cordova Union Oil Corp. et al		4		4
Cox & Jake Hamon Jr, et al			1	1
Crabtree-Rowe-Johnson			1	1
Cranfill-Reynolds Co.		1	1	2
J. G. Curtis & Lowe			1	1
Deep Rock-Wainwright-West Oils, Ltd.			1	1
Geo. DeMontrand et al			1	1
Davis & Russell		1		1
Dan Dillon et al		1		1
Dohman et al			1	1
W. H. Dunning-C. P. Link-Markham		1	1	2
East Texas Ref. Co.			1	1
Elzey Drl. Co. & C.H. Tautenhahn		1	1	2
Geo. Fagg et al			1	1
Federated Oil Co.	2	3	3	8
Frank Foster-Deep Rock et al	2	1	3	6
Foster-Jeffries & Kolp			1	1
Foster-Little et al		2		2
Fox-Butler & Heflin			1	1
Gibson-Johnson & Merrick Drlg. Co.			1	1
R. W. Giles (Shreveport Prod. Co.)		1		1
A. M. Griffith et al		1		1
Gulf Prod. Co.		2		2
W. B. Hamilton-Consolidated Oil Co.		3	3	6
L. P. "Pink" Hammond et al			1	1
Haynes Drilling Co.			2	2
Heep Oil Co.		1		1
Heep Oil Co. & Imperator Oil Corp.				1
Hill & Jack Younger		1		1
Humble O&R Co.	1	9	6	16
Houston Oil Co.-Tidal Oil Co.		1		1
H. L. Hunt et al			1	4
H. L. Hunt & Graddy H. Vaughn	1	1		2
C. M. Joiner (E. R. Tennant, Rec.)		3	2	5
Irwin et al		1		1
Ed. M. Jones-Houston Oil Co.		1	2	3
Jones Oil Co.		1		1
K. & M. Oil Co.		1		1
Karona Oil Co. (Heard)			1	1
Lasalle & Davenport		1		1
Laster Oil Co.			1	1
Laster Oil Co .& Deep Rock			2	2
Laster Oil Co. & Miller		1		1
Laster & Little		1		1
Latex Oil Company			1	1
Leonard Petroleum Co.		1		1
Lide-Taylor Oil Co.			1	1
Lide-Rowe Oil Co.			1	1
Lively & Bryan			1	1
Luling Oil & Gas Co.			1	1
John E. Mabee, Inc.		1	1	2
Magnolia Pet. Co.		3	3	6
Marine Corp. et al		1		1
Chas. McDonald et al		1		1
McIntyre Drilling Co.		1		1
Merrick Drilling Co. et al		1		1
Mid-Kansas Oil & Gas Co.			1	1
Morefield Drilling Co.		1		1
H. S. Mose & Pete Urschel	1			1
Moss et al			1	1
Oliver & Brown		1		1
Olsen Bros. et al		2	1	3
John W. Olvey & Sample		1		1
Pearl Oil Co. (Vitek)		1	1	2
Petroleum Marketing Corp.		1	4	5
A. W. Phillips-Trico Oil Co.	1	2		3
Pilot Oil Co. (Tom E. Cranfill)			1	1
Pioneer Oil Co. (Moody-Seagraves)		5	1	6
Pollard et al	1			1
Republic Prod. Co.-Lewis Hart		1		1
Robert Oil Corp. et al		1		1
Robertson Drilling Co.		1		1
Rusk County Oil Company		1		1
Jim Rush et al		1		1
Nat Sadler et al			1	1
Shasta Oil Company		2		2
T. G. Shaw Interests		1		1
Bert J. Shaw Oil Co. et al		1	1	2
Shaw Oil Co. & Imperator Oil Corp.			1	1
Shell Pet. Corp.	1			1
Sinclair O&G Co.		4	4	8
H. R. Smith-Gulf Prod. Co.		1		1
Stanolind Oil & Gas Co.		1	1	2
H. R. Smith-Houston Oil Co.		1		1
Texas Inland O&G Co. (G. W. Basom)		1		1
Tidal Oil Co.-Wm. Johnston		2		2
Turman Oil Co.	1		2	3
C. E. Upchurch et al		1		1
Ward Oil Corp.-J. R. Elliott-Johnson		1	1	2
Ward Oil Corp.			1	1
Westexas Oil & Roy. Corp.		1	1	2
Witherspoon Oil Co.		1		1
Woodley Petroleum Co.		2		2
Total	16	104	86	206
Total previous week	18	73	70	161

GREGG COUNTY OPERATIONS

Operator—	Lens.	Derricks & Rigs	Active Tests	Total
Alco Oil Corporation	1			1
Arkansas Fuel Oil Co.			1	1
Arkansas-Farrell-Moncrief et al		3		3
Claude Bell & R .A. Graddy, Inc.			1	1
W. L. Brandon-McCamey et al			1	1
D H. Byrd-Gulf-Humble et al		1	1	2
Daisy Oil & Gas Co.		1		1
Daniel & Tom C. Patten		1	1	2
Harry W. Elliott et al			1	1
E. E. Eslick & Little		1	1	2
Frank Foster-East Texas Ref. Co.			1	1
Mamie Hammonds-Clark et al			1	1
O .L. Hickman et al			1	1
Holloway & Hardin		1		1
Ed. B. Hopkins & A. R. Byrd, Jr.		1		1
S. F. Hurlburt et al		1	1	2
Leonard Petroleum Co.		1		1
Lewis Prod. Co.	1			1
Lide-Hunter-Rowe			1	1
Magnolia Petroleum Co.		1	1	2
K. E. Merren-Miller-Van Horn			1	1
Navarro Oil Company			1	1
Phares & Sample	1			1
W. C. Ray Drilling Co.			1	1
C. Rosenfield et al		1		1
Roeser-Pendleton, Inc. et al			1	1
Robert et al		1		1
Jim Rush-Simms-Hubbard		1		1
Selby Oil & Gas Co.		1		1
Shell Petroleum Corp.		1		1
Smith et al		1		1
Stanolind O&G Co.-Simms Oil Co.		1		1
Sultan Oil Co.			1	1
Tidal Oil Co.		1		1
Paul Vitek et al		1		1
Tidal-Evans & J. K. Wadley	1			1
J. K. Wadley et al	1			1
Werby & McMinn et al		1		1
P. H. Wilson et al		1		1
Winona Oil Co. et al		1		1
Ben Youngblood et al		1		1
Total	5	25	18	48
Total previous week	4	24	14	42
Total both counties	21	129	104	254
Total previous week both counties	22	97	84	203

Steel Storage for East Texas Production Increases Rapidly

Tyler, Texas.—Installation of steel storage in East Texas is on the increase, and during the past week the Woodley Petroleum Company, Shreveport, contracted for the erection of about one-quarter million barrels of tankage in the Kilgore field. This company purchased a new 80,000-barrel steel tank, and is to have two 55's; one 37,500 and a 20,000-barrel tank now standing in the Cotton Valley field, Louisiana, dismantled and transferred. Humble Oil & Refining Company is reported to have contracted for the immediate erection of two 64,000-barrel steel tanks to be erected on the Kangera farm, located west of the Joiner field. The latter has two tanks of similar capacity ready for service in Gregg County. Central Pipe Line Company withdrew its request for bids on a large steel tank last week, and purchased two 5000-barrel tanks to be erected at its Overton tank car rack, and a 10,000-barrel tank to be located at its gathering station in the Joiner field.

Dallas Geologists Agree East Texas Producing from Woodbine

Dallas, Texas.—Woodbine won by a majority vote as being the correct identification of the oil producing sand formation in Rusk and Gregg Counties, East Texas, during a christening ceremony staged here March 7 with the Dallas Petroleum Geologists as host to a large gathering of well known members of the profession from various points in the Southwest. The new source of prolific production in East Texas has heretofore been called the Tokio sand by some geologists, particularly those from the Louisiana-Arkansas district, while others have contended that it is Eagle Ford, or a combination of Tokio-Woodbine or Eagle Ford-Woodbine.

The discovery well of the district was located and completed without the aid of the geological profession by C. M. Joiner and associates of Dallas.

R. B. Whitehead, chief geologist for Atlantic Oil Producing Company and head of the Dallas Petroleum Geologists, presided at the meeting, and later gave a talk over the radio. Others taking part in the discussions included: Dr. Robert T. Hill, Dallas; Dr. Fred B. Plummer, chief of the Texas Bureau of Economic Geology, Austin; Gayle Scott, Texas Christian University, Fort Worth; W. C. Spooner, Shreveport; P. W. McFarland, Merle Israelsky, Houston; J. B. Sasse, Dallas, and E. M. Rice, Pure Oil Company, Van.

Van Production Increased on March 1; Unexpected Failure

Tyler, Texas.—An unexpected failure appeared on the east edge of the Van field early this week when Pure Oil Company's Frank Blackstock 1 tested salt water and mud at 2930-90 feet, and plugging orders followed. This test is located in the southwest corner of 40-acre lease, and less than 1000 feet east of flowing wells. It logged first Pecan chalk at 1670 feet, and top of Austin chalk at 2630 feet, with a surface elevation of 471 feet. This failure is about equal distance north and south from two other dry holes drilled on the east flank of the field. Sun Oil Company and Humble Oil & Refining Company share the loss of potential oil holdings with Pure Oil Company by the disappointing showing made by Blackstock 1, all being outside the unitized block.

Pure Oil Company added two new producers during the past week on proven locations. The company also moved in derricks for the drilling of five new tests on unitized leases, and one outside the unit.

Production in the Van field automatically advanced to 35,000 barrels daily effective March 1 in accordance with proration orders approved by the Texas Railroad Commission in January.

Proposed Pipe Line Would Take East Texas Oil to Shreveport

Shreveport, Louisiana.—Another outlet for East Texas oil production in Gregg and Rusk Counties, was announced last week with the formation of Atlas Pipe Line Company, Inc., in Shreveport headed by E. R. Ratcliff, well known independent operator, and Sam D. Hunter, head of several large independent companies, who are associated with a group of capitalists and officials of several independent companies including officials of the Shreveport-El Dorado Pipe Line Company, a large independent company engaged in the production, refining and retail phases of the industry.

Subject to ratification of the stockholders of the Shreveport-El Dorado Pipe Line Company that company will be taken over by Atlas Pipe Line Company, Inc., and stock in the new company issued to stockholders of the Shreveport-El Dorado company.

The line to be built from the East Texas oil field, the exact location of whose Texas terminus has not been announced, will cost approximately $700,000. Its Shreveport terminus will be the company's Shreveport refinery, which has a daily capacity of 5,000 barrels.

Shreveport-El Dorado Pipe Line Company already has an eight-inch pipe line from Shreveport to El Dorado, Arkansas, which will put East Texas pipe line facilities in reach of several refineries in and around El Dorado should they wish to utilize the cheap light oil from the East Texas field. The line will have a daily capacity of 18,000 to 24,000 barrels. A pumping station will be built about midway of the line which will be approximately 75 miles in length. Whether 18 miles of eight-inch line recently taken up by the Shreveport-El Dorado Pipe Line Company in Arkansas, will be used in the new project was not announced.

The assets of Shreveport-El Dorado Pipe Line Company and its subsidiary, Sparco Gasoline Company, are approximately $6,000,000. The stockholders of these companies will get stock in Atlas Pipe Line Company, Inc., and in the Spartan Refining Company, which has also been organized, as a subsidiary. Officers of Shreveport-El Dorado Pipe Line Company are: William Lilley, Philadelphia, Pennsylvania, president; B. H. Gray and J. B. Atkins, Jr., vice-president; J. F. Atkins, secretary; J. L. Polk, assistant treasurer; H. M. Arthur, pipe line superintendent; and D. H. Christman, refinery superintendent.

Officers announced for Atlas Pipe Line Company are: E. R. Ratcliff, president; S. D. Hunter, vice-president and chairman of the board; B. H. Gray, vice-president and treasurer; J. F. Atkins, secretary; and J. S. Reily, assistant treasurer. Directors besides the officers are: J. K. Wadley, Texarkana, Texas, lumberman and capitalist; J. W. Olvey, independent oil operator of El Dorado, Arkansas, and East Texas; R. T. Moore, Shreveport banker; Guy Oakes, W. C. Woolf, C. D. Keen, J. B. Beaird and William Chrisman.

Officers of the Spartan Refining Company are: E. R.

Ratcliff, president; S. D. Hunter, vice-president; and J. S. Reily, secretary-treasurer.

The stock of Atlas Pipe Line Company in its charter is listed at 500,000 shares of no par value. However, it is understood approximately $1,000,000 of new money will be put into the new firm. Spartan Refining Company, according to its charter, is listed as having 50,000 shares of no par value.

Mr. Ratcliff, head of the new company, was formerly president of Louisiana Oil Refining Corporation, which he aided in organizing. He withdrew from that company in 1922. Only recently the Louisiana Oil Refining Corporation was sold to Cities Service Oil Company for Arkansas Natural Gas Corporation, and formal transfer of all the properties is expected soon. Mr. Hunter is head of the Pelican Natural Gas Company, and several other companies. Mr. Olvey is head of the Marine Oil Company. Mr. Moore is chairman of the board of the Commercial National Bank in Shreveport.

Lease Seven-Mile Railroad Right-of-Way Through Joiner

Tyler, Texas.—Continuous development program is to be assumed by Texas Unity Oil Company, Houston, in acquiring drilling rights to about seven miles of the right of way of the I.&G.N. Railroad in portions of Rusk and Gregg Counties. The former is reported to have contracted to start the first test within 30 days from date of lease, then drill additional tests within 30 days after the completion of the last one, also take care of all offsets, which promise to reach sizeable proportions in the Kilgore field. The railroad will be carried for 25 per cent of the gross oil and gas revenue as a bonus for the drilling rights, and it is also stipulated that all the oil produced must be routed via the Missouri Pacific System unless pipe line rates are more than nine cents per barrel cheaper than tank car shipments.

Two Tests Near Gregg County Discovery Ready to Complete

Longview, Texas.—Two tests located a short distance north and south of the lone oil producer in Gregg County were ready to complete early this week after coring into the Woodbine sand at normal levels. Arkansas Fuel Oil Company, part owner of the discovery well on the Lathrop farm, has cemented casing above oil sand topped at 3579 feet in McKinley 1. Roeser-Pendleton, Inc.-Frank Foster and East Texas Refining Company's Rodden 1, located south of the producer, cemented casing on cap rock at 3570 feet with rich oil sand core recovered at 3575 to 3578 feet. Completion of the latter will be delayed for a week as pipe line connection is to be provided by the East Texas Refining Company, which is at work on a four-inch line to Longview.

Drilling of plug on Foster-East Texas Refining Company et al's Rodden 1, which was reported last week as having assured a three-mile southwest extension for the Longview field by flowing through drill stem at a total depth of 3542 feet, is also delayed for pipe line connection from the above system.

Third Rusk County Prospect Shows for Failure on Test

Tyler, Texas.—Efforts to establish a third oil area for Rusk County went amiss late last week when L. W. Capps, W. R. Smith, W. D. Anderson and Roy Cameron's wildcat test on the J. L. Cochran 244-acre farm, Jacob Roth Survey, drilled into Georgetown lime at 3769 feet after having logged key formations favorable for production. This wildcat is located about 10 miles southwest of Henderson, and has been followed closely by the major companies. The sponsors of the project were planning to make a new try for a drill stem test early this week with slight hopes that oil may be recovered from soft formation encountered below the cap rock that could not be retrieved with the core barrel. The first drill stem test attempt missed fire.

CURTAILMENT OF EAST TEXAS TO COME BEFORE COMMISSION

(*Continued from page* 45)

prices in expectation of receiving greater return for oil sold. In fact some operators have become so deeply engulfed with drilling obligations on high priced leases that proration is needed to afford a profit on the venture. Major companies, with few exceptions, favor proration, and in order to accomplish same have announced that the purchasing of oil will be contingent upon enforcement of production restrictions. Such a policy will likely be followed by the companies now at work on trunk lines into the district as each have controlled oil in sight that will keep their lines filled for an indefinite period.

Unfairness of the orgy of drilling and production withdrawal from Rusk and Gregg Counties to older fields that have been abiding by proration for months in Texas, Oklahoma, Kansas and New Mexico is listed as being another reason why restrictions should be introduced by those in favor of prorating the former. These prorated areas are already feeling the effect of market competition offered by comparatively cheap priced crudes from East Texas, and are confronted with possibilities of further curbing of production allowances as the new fields gain in output.

Without restrictions the East Texas district offers possibilities of dissipating the flush output by mid-summer, barring the possibilities of additional strikes. Should the established oil areas be curbed while in the middle of the development program the unfavorable influence is in danger of dragging along for several years. The crude price structure in East Texas is destined to hover around 50 cents per barrel beyond the middle of 1931 by reason of the vast volume of crude obligated for delivery at cheaper prices, with possibilities of new low levels being reached temporarily. These crude contracts have been made in good faith by both parties, and as long as any appreciable number are in effect the posted price of major companies will be regulated accordingly, based on explanations offered recently by major companies in posting price reductions in systematically prorated fields in the Greater Mid-Continent.

When the history of the oil development in Rusk and Gregg Counties has been written it is generally predicted that proration of major fields will have gained a point. Over-drilling and wasteful operators are inevitable in a campaign such as is now being waged in the two counties, while general operating expense has climbed beyond all reasonable levels in the race for the flush oil production. The drilling rush has been ill-timed, as development work made its start at the beginning of the rainy season, and excessive costs are involved in trying to carry on with such a transportation handicap.

South Texas Field Developments

EARL POST, *Staff Correspondent, San Antonio, Texas*

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Refugio Placed on Smaller Chokes for Ten-Day Test

San Antonio, Texas.—No material decline in Refugio production is expected to result from the placing of all wells in sands at 5400 feet or deeper on ¼-inch chokes. The field was placed on a 10-day production experiment March 10.

J. B. Moncrief, proration umpire at Pettus, has been named to supervise the pinching down of the wells. Most of the 59 deep wells producing high gravity oil were pinched down before action was taken at a meeting here of the Oil and Gas Division of the Texas Railroad Commission March 3, at which Lon A. Smith of the commission presided.

It was explained at the hearing that approximately 200,000,000 cubic feet of gas daily is going to waste in the Refugio field from the deep horizons. Delegates at the meeting said that more than 25 per cent of the waste was coming from less than half a dozen wells which were being produced on large chokes. Some of the wells were on five-sixteenths-inch chokes and a few on as much as three-eighths and half-inch chokes. Several plans are being worked out for the utilization of the waste gas.

A total of 178 wells in the Refugio field show an average daily production of 33,135 barrels, according to last week's production figures. Of this amount 17,890 barrels is high gravity oil coming from the deep wells, from 5400 feet down to 6450 feet. The remainder of 15,245 barrels is coming from the so-called shallow sands from 3600 to 3700 feet and is low gravity oil. There are 119 low gravity producers.

Among operating companies having representatives at the meeting were the United Production Corporation, Luling Oil and Gas Company, Houston Oil Company, Sun Oil Company, Phillips Petroleum Company, Saxet Oil Company, Mission Drilling Company and the Moody-Seagraves Producing Company.

Necessary arrangements were handled by a committee of operators consisting of B. M. Nowry of the United Production Corporation, George E. Smith of the Mission Drilling Company and G. J. Turner of the Phillips Petroleum Company.

Two Completions Link Up Production in Pettus Area

San Antonio, Texas.—A 900-foot east extension to the Ray-McKinney pool and the linking of that area with the townsite pool, featured activity in the Pettus field, Bee County, during the week. Both wells are on the Ray tract and are owned by the United Production Company.

Ray 34 was completed for an initial production of 325 barrels with 225 pounds working pressure at a total depth of 3953 feet. The sand was logged at 3945-50 feet. The well is 900 feet due east of the Ray 26, which widened the field 1000 feet to the east late in January when it came in as a gasser and turned into an oil well of 282 barrels.

Location has been made for Ray 35, 1100 feet due east of Ray 34 and materials are being moved in. The well is 3253 feet along the southwest line from southwest corner of Thomas Hanson Survey, thence 1567 feet northeast at right angles to the southwest line. Its completion as a producer will give the field its third eastward extension, a total of 3000 feet, since the first part of the year.

Midway between the Pettus townsite producing area and the original pool, Ray 31 has picked up a sand at 3562-69 feet, which showed heavy saturation. Casing is being set on top of the pay without a drill stem and a producer is highly probable. The unproven gap between these pools is about 3500 feet and the completion of the well as a producer will be considered to have proved up the strip.

Just south of the townsite, Mauldin et al's Fee 1 is attempting another drill stem test after three failures. The well topped the sand at 3835 feet and showed some saturation when cored. Operators have been working on this well for months.

Rowan and Hope's Mrs. Fannie Goree, five miles west of the Grayburg pool and about 12 miles from Pettus production, has reached a level of 3540 feet, but has not encountered the pay found in the Grayburg discovery well. Its prospects are not so bright.

Failure Leaves SRC Pool Still With One Producer

San Antonio, Texas.—Another failure has been recorded in the SRC pool of Duval County. Vacuum Oil Company and S. R. & C. Company's Duval County Land Company 3, 300 feet east and slightly north of the discovery well, has been abandoned at 1830 feet, and the rig is being moved approximately 600 feet west for the fourth well on the same fee.

This field was discovered by these operators in 1930 by the Duval County Land Company 1, which made 300 barrels initial from 1741-44 feet. Three other wells in the vicinity, including two direct offsets, were failures. The discovery well is the only producer. It is in Section 293.

No. 3 showed a sand at 1731-40 feet and casing was set at 1726 feet. It bailed dry and was carried deeper. At 1741-44 feet, it showed some oil and a lot of water. No further showings were encountered the remainder of the depth.

San Antonio, Texas.—Houston Oil Company's Brown Land and Cattle Company 3, northwest corner of M. B. Kivlin Survey, Mt. Lucas gas district of Live Oak County, is attracting considerable interest at this time. At last reports the well was trying to loosen a drill stem at 5273 feet. The same company's Booth 1-B, in the same survey, made a 30-barrel well slightly below this depth.

The company's No. 4 well, on the same fee, is reaming at 4841 feet, preparatory to coring. It is in the southwest corner of the same survey.

Phillips Petroleum Company's W. W. Goebel 1, three miles northeast of Oakville on the Refugio School lands is drilling below 2660 feet.

Darst Creek Prorated Outlet To be Cut; Drilling Active

San Antonio, Texas.—A material cut in allowable runs, probably one-third of the present 30,000-barrel daily output, is expected to be asked by Darst Creek producers for that field when they meet with the Oil and Gas division of the Texas Railroad Commission March 12. If the cut is made, it will give the field a daily output of about 20,000 barrels, based on a potential of 152,201 barrels.

Operators are attempting to keep up the potential of this field through a fairly intensive drilling campaign, including nearly one-half dozen wells. Two wells are on the pay, Sun Oil Company's Knoblock 14 and the Gulf Production Company's McKean-Dix 16, both of which have casing set and will be drilled in within a couple of days.

One-fourth mile due south of the field, Sun Oil Company's Dowdy 1, Darst Survey, appears an extension to the producing area. It has the chalk at 2208 feet and will probably strike the lime as high as the other producers in the field.

Three and one-half miles east of the field, Luling Oil & Gas Company has abandoned Mrs. Fannie Nixon 1 at 3215 feet, coring the Edwards lime dry.

Goliad County Gasoline Well Completing at Lower Depth

San Antonio, Texas.—Not satisfied with production obtained in the sand at 4198-4212 feet in Allen 1, O. Marshall Survey, Goliad County, the Slick Estate has deepened the well to 4238 feet. It is in process of completion. The well is said to have shown 40 feet of saturated sand, interposed with shale, indicating a much larger producer than originally.

The test when first completed made 60 barrels of gasoline and 40,000,000 cubic feet of gas, but was killed to deepen.

It is located 1500 feet east and south of the discovery well, Slick's Poetter 1, which made 500 barrels initial production from a sand at 4190-4212 feet.

A location has been made by Slick Estate for Reidel 1, 1830 feet southwest of the Poetter well, and materials will be moved on as soon as the Allen is completed. It is in the W. C. Brown survey.

Dozen Nueces County Wells Due for Early Completion

San Antonio, Texas.—Nueces County again takes the spotlight in South Texas oil developments as nearly one-half dozen wells near deep pay sand and give promise of important extensions.

Houston Oil Company's Morgan 3, south of the Saxet field in the gas district opened July 4, 1930, cored a sand at 4048 feet, which showed dry gas with 250 pounds pressure on a drill stem test. It is being carried deeper.

Moody-Seagraves Producing Company's Sedwick 1, 1200 feet north of nearest production in the Saxet field, is making hole below 3200 feet and is expected to strike the sand shortly.

Saxet Oil & Gas Company is coring at 3445 feet on its Dunn 7, while it is rigging up another well on the same lease. Both tests are in the Saxet field.

Two and one-half miles northwest of the field, Bess et al's Boory 1 is drilling around 3300 feet and should reach an interesting stage shortly.

V. F. Neuhaus et al's Bauer (formerly Grim and Yakey), 15 miles west of Corpus Christi and just north of Robstown, has been abandoned after drilling to 5507 feet. It is one of the deepest wells to be drilled in this part of the Corpus Christi district.

In Agua Dulce field, Houston Oil Company's Ollie Purl 1-B is reaming down to 5240 feet. This well created a great deal of excitement recently when it showed up for a gasser of several million cubic feet on a drill stem test at 4835-39 feet. There was an odor of oil.

San Antonio, Texas.—Trinity Drillers and Texas Unity Oil Company's C. E. Hungerford, two miles east of the Edna gas field, Jackson County, has been abandoned at 4500 feet. It encountered several sands which showed both oil and gas. The test is 4700 feet from the north line and 900 feet from the west line of the H. Smith Survey.

The accompanying picture, taken in the San Antonio district, South Texas, shows, from left to right, the following men: A. Dennys Cadman, scout for Humble Oil & Refining Company (and son of the president of the British subsidiary of Standard Oil Company of New Jersey); A. B. Hutchinson, driller, United North & South Development Company; and C. E. Scott, fireman, United North & South Development

Gulf Coast Field Developments

JACK LOGAN, *Staff Representative, Houston, Texas*

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Operators' Secrecy Arouses Interest in Montgomery Test

Houston.—Leasing activity in the vicinity of Conroe, Montgomery County, has shown a decided increase as a result of favorable showings found in Price and Wilhite's (Kelly Baker et al) Juergus 2. A good show of oil was reported in the sand at 3534-52 feet. Casing is being set in the well and test will be made within the next few days.

Information regarding the shows and formations encountered during the drilling of the well have not been available due to unwillingness of the operators to let spectators on the location. The location has been fenced off and only members of the drilling crew and the operators can gain entrance.

The formation in which the sand was found is a matter of conjecture among those who have speculated as to the possibility of finding oil in this test. Despite the unwillingness of the operators to divulge any information concerning the well, rumors have been so prolific and so seemingly well-grounded that many leases are being taken in the adjoining area on the strength of them.

Five Locations Made of West Side of Barbers Hill Field

Houston.—Activity on the west side of Barbers Hill field has been stimulated by the location of five wells within the past three weeks. Completion of The Texas Company's Winfree 1 late in January for an initial production of 1200 barrels daily has caused an exceptional amount of activity on the west side of the field.

Humphreys Corporation definitely abandoned Kirby 10-A, Henry Griffith Survey, on the east side of the field, last week at 6955 feet. The rig is being torn down and will be moved to the west side of the field for the location to be made for drilling an offset to The Texas Company's Winfree 5, the test to be located in Lula Barber lease, William Bloodgood Survey. Humphreys Corporation's Barker 1, the first offset to The Texas Company's lease, is drilling in rock at 3860 feet. Rio Bravo Oil Company's A. M. Fisher 2, a southeast offset to The Texas Company well and an east offset to the Humphreys Corporation test is drilling in sandy lime at 3628 feet.

Offsets are also being drilled east of The Texas Company's Winfree lease and a third offset well on the Winfree lease is being drilled by Humphreys Corporation opposite Yount-Lee Oil Company's test. It is likely that Sun Oil Company will make location north of the Yount-Lee tract and Humphreys Corporation will drill one or possibly two wells to offset that location.

Production on the west side of the field has come from the 5500-foot level and has been averaging about 600 barrels initial production daily for all of the wells completed on that side of the dome. The oil sand on this flank of the dome is estimated to be about 100 feet thick. Sun Oil Company's Winfree 1, completed in August, 1930, is still making around 650 barrels daily after having flowed for over seven months.

Production of the Barbers Hill field through December 31, 1930, was over 13,000,000 barrels. The potential production of the field will be considerably strengthened with the location of this new producing level and several new facts on the outline of this unusual dome may be brought to light.

Apparently there may not be an "overhang" or ledge of salt on the west side of the dome as on the north, east and south sides, since no salt was found in The Texas Company's Winfree 1. Sinclair Oil & Gas Company's Smith 2 and Mills Bennett Production Company's Smith 1, both on the northwest side field, were completed without having encountered salt.

Pettus Operators Agree and Stay Within Allowed Output

Houston.—Harmony in following the proration plans and adherence to the allowable production of oil in the Pettus field has caused that area to proceed with its schedule unmolested by the proration committee. All the operators in the field have thoroughly agreed upon the allowables and have stayed within the limits of the schedule as issued by the commission. A gauge of the wells in the field has been taken once every three months and all companies operating in the field have abided by the allowables set for them as determined by the potential production recorded during the gauging. A meeting of all operators in the field will be held during the last week of this month for the purpose of determining allowable production for the second quarter.

The last gauge of the field was made December 31, 1930, and the present schedule was enforced at that time with the completion of the gauging. The potential production of the field as shown by the gauge was 6,102 barrels daily from 19 wells. Allowable production for the field was set at 4,500 barrels per day, or 73,746 per cent of the potential production.

United Production Corporation is the largest producer with 33.6 per cent of the total production from five wells, with total daily allowable of 1511 barrels. Houston Oil Company is second with a total of 950 barrels per day or 21.1 per cent while Humble Oil & Refining Company is third with 799 barrels daily and 17.8 per cent of the total. The remaining companies with their percentage and total production are: C. R. M. Oil Company, 505 barrels or 11.2 per cent; Buchanan et al, 381 barrels or 8.5 per cent; Slick

Oil Company, 343 barrels or 7.6 per cent; and Glasscock Brothers, 11 barrels or .2 per cent.

Potential production and allowable production of the various companies is as follows:

Company—	Number wells	Potential Daily Production	Allowable Daily Production
United Production Corp....	5	2,047	1,511
C R M Oil Company.....	2	685	505
Houston Oil Company	4	1,289	950
Humble Oil & Refining Co.	3	1,084	799
Buchanan et al	2	516	381
Slick Oil Company	2	466	343
Glasscock Brothers	1	15	11
Total	19	6,102	4,500

Fourth Failure at Cedar Bayou, Chambers County

Houston.—Sloane Prospecting Company has abandoned its wildcat test, Ulrich 1, four miles west of Barbers Hill, in shale at 5520 feet. This test is 25 feet east of the west line and 370 feet south of the north line of Camille Ulrich 75-acre tract.

This makes the fourth failure recorded for Sloane Prospecting Company in the Cedar Bayou area. The first well to be drilled, Davis 1, was abandoned at 6410 feet in sandy shale. Slight gas shows were encountered in both the Ulrich 1 and Wosova 1 at 4900 feet. Two different gas shows were encountered in Ulrich 2, the first at 1500 feet and the second at 3215 feet.

Houston.—Tests to be made this week on Pure Oil Company's Yount-Lee 10, Sweet Lake, Cameron Parish, will determine whether producitons will be established at the 6800-foot level. The well encountered an oil sand at 6809-30 feet and casing was set. This test is located 1924 feet north and 2324 feet east of the southwest corner of Section 12-13S-8W, approximately 150 feet east of Yount-Lee 8 which was completed for 175 barrels of oil daily at 4475 feet.

Production has been developed from several deep horizons at Sweet Lake.

Houston.—Standard Oil Company of Louisiana has abandoned Wilbert 8 on the north flank of Bayou des Glaise dome, Iberville Parish, in preference to building a new derrick. The test had reached 4295 feet.

Gulf Refining Company is drilling a wildcat, Wilbert 8, at Bayou Choctau, Iberville Parish. This test is now drilling in gumbo at 1040 feet. It is located 150 feet south and 115 feet west of the northeast corner of Section 60-9s-11e.

Houston.—Humble Oil & Refining Company has expressed its opinion of the area in the vicinity of its test, Cienski 1, in Grimes County, by releasing all holdings in that territory. The test was abandoned last week at 1591 feet in shale. No showing indicative of any possible production was encountered in the well. This wildcat test is the only prospecting that has been done in the county by Humble Oil & Refining Company and apparently no further attempts will be made to locate oil in the territory.

Rocky Mountain Area

▼ ▼

No Decision Reached on Platte Valley Program

Denver, Colo.—The Platte Valley Petroleum Company held a directors meeting of several days duration recently, but came to no definite agreement concerning the acceptance of contracts to drill out its five-well program this summer. Another meeting is to be held this month at which contracts will probably be signed. Reiter-Foster Oil Corporation holds a tract of land which offsets the discovery lease, and is reported to have offered to furnish a rotary outfit, set it up, and furnish necessary casing for an adequate test. If oil was dicovered the company would pay a suitable amount for the equipment; if no oil was found there would be no charge for the outfit. Continental Oil Company also proposed to drill a test for the Platte Valley people, but this is said to have been refused. An unidentified major operator offered to drill a test, payment for which was to be taken from production.

Discovery well on the Greasewood dome, which was completed by the Platte Valley Company last fall, is holding up its production around 370 barrels per day, although it is understood not to be drilled far enough into the producing sand to show its total possibilities.

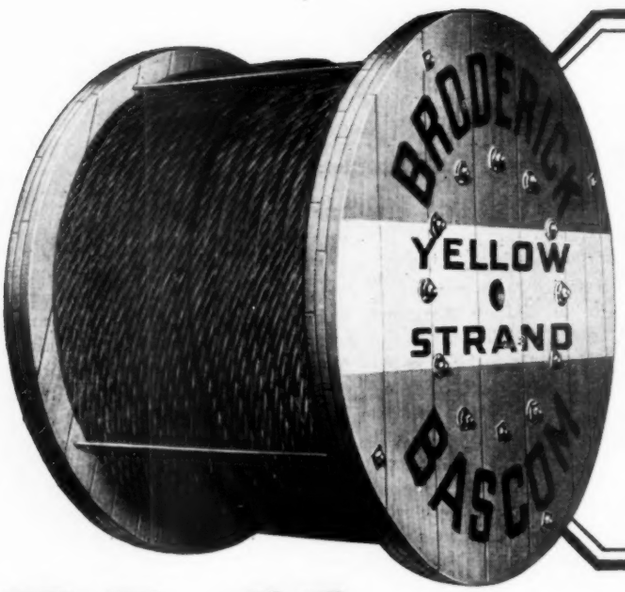
Moving in for Deep Test at Dry Creek, Southern Montana

Billings, Mont.—Holdings of Beartooth Oil Company in the Dry Creek field, southern Montana, have recently been sold to the J. D. Cook interests of Denver, for $1,100,000 which is to be paid out of production. A rotary rig for a test to be drilled in the structure is being moved in by the Charles E. Orchard interests of Denver for a deep test on Section 7-7s-21e, some 100 feet south of the Beartooth's validating hole.

The Dry Creek field has been proved both for gas, in the second Frontier sand, and for high grade oil in the Dakota. Ohio Oil Company has previously done all of the development work in the field; it drilled the discovery gasser, completed the first oil producer, and now has two drilling tests under way, one on Section 11-7s-21e, which is drilling below 3612 feet, and another on Section 2-7s-21e, which is drilling below 1047 feet. Locations are made for several other tests.

Rigged Ready for Deep Test On Neibor Dome in Wyoming

Worland, Wyo.—Ohio Oil Company's deep test to the Frontier series, expected around 7000 feet, to be drilled by Noble Drilling Company of Tulsa, is rigged and ready to spud in on Neibor dome, 10 miles south of Worland, in Washakie County. The company has one good water well drilled and on production near the cook house, and is now drilling another about 100 yards distant. Camp consists of four buildings, one of which is a bunk house. The Neiber dome is 20 miles east of the Grass Creek field and in the test now starting it is believed that the drill should cut 14 sands within 8000 feet. Heavy rotary equipment is to be used to do the drilling, and an Oklahoma City crew is on the job.



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Louisiana--Arkansas Field Notes

Loring Oil Company Plans 7000-Foot Test at Zwolle

Shreveport, Louisiana.—A test to be taken to 7000 feet or possibly deeper in the Zwolle field of Sabine Parish, was announced during the week ending March 7, by Loring Oil Company, a subsidiary of Benedum and Trees, and owners of more than 10,000 acres in and adjacent to the Zwolle east field. Location for the test is Bowman-Hicks 16, 1000 feet south and 330 feet east of NWc Section 9-7-12. It is planned to set 10-inch casing at top of the Zwolle chalk encountered at 2200-2400 feet in Zwolle and in which present production is found, and then drill ahead for the deeper pay. The Blossom is definitely eliminated, apparently as a pay horizon as it is notorious in Zwolle for its salt water and has hampered deeper drilling there no little. The new test probably will go to the upper Trinity, unless the Woodbine yields pay.

Frank Buttram and Associates' Hale 1, NE NE Section 1-7-13, a half mile southwest of the producing part of the Zwolle field in the town limits, late last week was swabbing seven to 10 barrels of oil hourly at 2354 feet in the Zwolle chalk. Marl was hit high in this test at 2066 feet, about 150 feet above the level of the townsite wells. It partly bridges the nine-mile non-producing gap between the townsite production and the original Zwolle west field in Section 14-7-14.

Four other locations besides the deep test were announced in and near Zwolle during the last week. Three Sabine Parish wildcats were abandoned. Lawrence and Associates' Hubly 1, Section 21-7-11, was abandoned as a dry hole at 2650 feet. D. H. Reddick, Trustee's Scretchfield 1, Section 18-9-12, between the Zwolle east field and the Pleasant Hill field, was abandoned as dry at 3310 feet. This test antedated the Zwolle east field discovery well. In South Sabine Parish, Wilson and Sons definitely abandoned Gandy-Garrett 1, Section 4-5-12w, as a dry hole at 2509 feet.

Magnolia Petroleum Company, drilling a deep wildcat, Lucius 1, NW NE Section 2-5N-12W reached base of hard lime at depth of 4060 feet and encountered a sandy shale at 4068 feet. Late last week it was drilling hard sand at 4136 feet.

No New Work Started in Arkansas During Week

Shreveport, Louisiana.—Smitherman and McDonald's Reed 1, SE NW NW Section 16-15-22, LaFayette County, Arkansas, eight miles southwest of the shallow Nevada County (Irma) field, and which had shown a little oil in a drill stem test at 1176-94 feet, was bailed Friday, March 6, showing salt water and a show of oil. A sand tester was then ordered. The test was bailed off to bottom after which it rose 150 feet in salt water with a show of heavy oil.

No new locations were made in Arkansas during the last week. Three workovers in the Union County part of the Smackover field, all by Lion Oil Refining Company, added 110 barrels initial production for the week. Cleary Brothers and associates definitely abandoned Hinson 1, Section 19-4s-16w, a wildcat in Hot Springs County, with total depth of 1604 feet and 11 feet of water sand.

Lenz and associates' Johnson 2, Section 24-15-26, a deep test in the Miller County wildcat area, shut down during the week at 4700 feet arranging to set a 700-foot string of eight-inch pipe to shut off a fresh water flow.

Two tests, one of them outside production limits, are waiting on cement to harden before being drilled in in the Urbana district of Union County. Marine Oil Company's W. B. Thompson B-2, SE NE Section 10-18-13, is in the producing area, having had 6⅞-inch casing cemented at 3577 feet after coring three feet of sand from 3579-82 feet. Wilson & Chapman's Hadley 1, NE SW Section 3-18-13, cored sand from 3561-63 feet and had 6⅝-inch casing cemented at 3539 feet, total depth being 3563 feet.

C. H. Murphy and associates' Union Sawmill 1, NW NW Section 18-18-13 in the same area, topped the Nacatosh at 2198 feet and tested four fourbles of salt water from 2190-2210 feet. It will be deepened.

Gas Show in Concordia Parish Test Important

Shreveport, Louisiana.—United Public Service Corporation has cemented nine-inch casing at 1400 feet in Saunders 3, Section 42-8N-10E, Concordia Parish, east central Louisiana, after this test showed an estimated two million to three million feet of gas in drill stem test at 1438 feet. The test was dry at 1415 feet. This development is of considerable interest due to the fact that a test in the same vicinity by A. C. Glassell last summer showed six million feet of gas along with considerable salt water at the 1400-foot level in the Jackson, resulting in much geophysical and geological work across Louisiana south of the Angelina-Caldwell flexure.

In Section 47-8-9E, Concordia Parish, during the last week Arkansas Louisiana Pipe Line Company abandoned Alexander 1 as a dry hole at total depth of 3010 feet in gumbo.

H. I. Morgan's latest test for the upper Trinity at the 1700-1800 foot level on the southwest flank of the Bellevue structure, Bossier Parish, blew out last week with an estimated twenty million cubic feet of gas, and thirty-three tribbles of drill stem were dropped in the hole, total depth being 1702 feet.

Jackson, Mississippi.—A torsion balance crew of Ohio Oil Company is working in southwest Alabama in the vicinity of Mobile and have during the last several days reached as far north as Jackson, Alabama, in the vicinity of which is located the Jackson fault and a part of the Hatchetigbee anti-cline. Oil seepages and gas shows, one said to have been as large as 25,000 cubic feet, have given rise to the belief in some quarters that the area adjacent to the Gulf Coast in Alabama like that of Louisiana and parts of Texas has salt domes.

Derrick is up for Alabama's latest location, Forked Lightning Oil & Gas Company's Nixon 1, SW NE Section 30-20n-2w, Sumter County.

Marion and Harrison County, East Texas, Draw Interest

Shreveport, La.—S. D. Hunter and associates, during the week ending March 8, abandoned as a dry hole, Daugherty 2, W. B. Burris Survey, Harrison County, East Texas, near Hallsville, at 3665 feet. This test was 60 feet from Daugherty 1, drilled last fall by Shell Rock Petroleum Company and which was junked at 3555 feet. Hunter and associates took over a 16,000-acre block from this company. No plans have been announced for another test on the tract. Little information was given on this test as it progressed and the exact formation in which abandonment was made has not been revealed.

Entry of Sinclair Oil & Gas Company into Marion County was announced during the week with the purchase of a 4000-acre block starting four miles west of Jefferson. Location for a test has been made for Wurtsbaugh 1, C. S. White Survey, 12 miles from Jefferson. Sinclair Oil & Gas Company has three geologists, headed by Don Danvers, in North Louisiana checking logs of tests and getting other geological data. Eden Oil Company is building derrick for DeWare 1, R. Hazelwood Survey, in Marion County.

Harrison County received a new location during the week, Siegel Brothers and associates making location for T. J. Taylor 1, F. O'Neal Survey.

I. M. Bradley and C. H. Kadane of Wichita Falls staked location for J. J. Asberry 1, G. W. Mitchell Survey, Shelby County, on a 4000-acre block centering in the John Edwards Survey, six miles northeast of Center, and have a drilling obligation to spud by April 1.

Under direction of officials of the Texas Railroad Commission and by the use of chemicals, the fire in Everett Production Company's E. L. McDaniels 1, Alamson Barr Survey, in Panola County, near the Shelby County line and near the town of Teneha, was extinguished. This test blew out at 398 feet while being drilled with a spudding machine, making 1,000,000 to 5,000,000 cubic feet of gas daily and 1500 barrels of fresh water and caught fire. A crater 25 feet in diameter formed. The gas volume rapidly declined. No casing had been set. Future plans have not been announced.

Shell and Humble Continue Mississippi Investigation

Jackson, Mississippi.—Gas rights on 800 acres in Hinds and Rankin Counties in and around the Jackson gas field were sold during the week by Pearl Valley Oil & Gas Company headed by John Glassell to United Gas Company for a reported consideration of $10,000 and one-fourth cent per thousand feet of gas taken from present wells or future gassers on the tract. Calculations regarding the gas are predicated on ten ounces above atmospheric pressure above 14.7. Under a working agreement no overhead charges by either party will be added to cost of wells should one drill a gasser and the other an oil producer and vice versa. In paying extensions on the leases one half the cost will be borne by the other party.

Having completed an ownership map of Wilkinson County, southwest Mississippi, members of a group of workers for Shell Petroleum Corporation has divided, some going to Franklin County, Mississippi, where an ownership map will be made and some to Lincoln County, Mississippi, for the same purpose. Similar maps will be made on several other south Mississippi counties, it is reported.

Reports are current here that Humble Oil & Refining Company may core drill its blocks in southwest Mississippi before development. It has 110,000 acres in Wilkinson County and approximately 80,000 acres in Franklin and adjacent counties.

Pocahontas Natural Gas Company, subsidiary of Missouri-Kansas Pipe Line Company, is reported to have taken a 15,000-acre block in Warren County, Mississippi, several miles south of Vicksburg where Fletcher & Toler, a geological firm, is reported to have developed a "hickey". No location for a test has yet been selected. Pocahontas Natural Gas Company is drilling Adams Banks Lumber Company 1, NE SW SW Section 10-3n-7e, Smith County, Mississippi, having set one joint of 12½ surface casing but later pulled it and are now reaming down to set 10-inch casing in gumbo at 450 feet.

Three Locations Announced in Jackson Area During Week

Jackson, Mississippi.—Three new locations were made during the week ending March 7 in the Jackson gas field embracing parts of Hinds and Rankin Counties. No completions were recorded in the gas field but a wildcat 10 miles west of Jackson in Hinds County, Mississippi Petroleum Company's Solvent 1, NE SW Section 14-5n-1w, which had been shut down, was definitely abandoned as a dry hole at 3074 feet.

The new locations are Grandstaff and Associates' Carr 1, Section 12-5-1e, Rankin County, in the southeast part of the gas field; Atkisson and Associates' Valentine 1, Section 18-5e-2e, Rankin County; and Industrial Gas and Electric Company's Illinois Central 1, Section 3-5-1E.

Dixie Petroleum Company's Clark 1, Section 6-16n-5e, a wildcat in Warren County, near Vicksburg, Mississippi, bailed dry without showing anything in the Sparta at 2248 feet. The hole will probably be deepened. Mississippi Drilling Company missed a drill stem in Scarbrough 1, NW NW Section 15-13n-14e, Winston County, a central Mississippi wildcat, in a sand at 2379 feet when the tester failed to open.

Gulf Refining Company's McLaurin 1, Section 30-6-2e, Hinds County, northeast of gas production, is giving trouble in the Midway chalk. Operators in sidetracking have gone into a third hole in which late last week drilling was under way at 2578 feet.

Jackson, Miss.—Using four Bamberg torsion balance instruments a crew of workers said to be in the employ of Humble Oil & Refining Company is working around Lucedale, Mississippi, George County, in the extreme southeastern part of the state, according to information received here.

In addition to a crew of detail men making ownership maps for Shell Petroleum Corporation in Lincoln County, Southwest Mississippi, three magnetometer men for Sun Oil Company are also working in that county.

Jackson, Miss.—Amory Petroleum Company's Carter 3, a small gasser in the Amory field, is being connected with the 10-inch gas line which was recently laid by Mississippi Natural Gas Company between the Amory gas field and the town of Tupelo, a distance of 30 miles. After some trouble with leaking joints due to the welding it was reported, 340 pounds pressure was put into the line March 6, and it was found to be now satisfactory.

Summary of Field Operations, February, 1931

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Field Development at Low Point During February

Field developments in February were at the lowest point in a number of years when well completions only aggregated 815 in the United States. This represented a decline from the January total of 341 wells; the total for that month also representing a decline under December of 323 wells. Compared with January and February of last year, the total well completions so far this year, 1971 against 3381 last year, show a decline of 1410 wells. This is perhaps the most severe decline in new drilling experienced in many years and reflects the unfavorable market situation prevailing at this time.

A decline in productive well completions from 519 in January to only 348 in February resulted in a materially lower initial production. A total yield from new producing wells of 459,727 barrels marked a decline of 337,133 barrels during January, while the total for the first two months of this year, compared with last year, represents a drop of 419,607 barrels. Texas, outside of Gulf Coast, recorded the largest decline in drilling during February. There, new wells completed amounted to only 224, against 349 in January. Significant, however, is the fact that initial oil production in that area was larger during February than in January; increasing from 135,756 barrels in January to 168,638 barrels in February. The new East Texas area was responsible for this gain in new oil production, where the completion of only 17 new producing wells resulted in a new production total of 99,580 barrels.

Oklahoma recorded the largest decline in initial oil production, when the total in February amounted to only 220,547 barrels, against 529,913 barrels in January. Developments in Oklahoma and Texas were of chief interest during February, with new production sharply lower in Oklahoma and activities in East Texas pointing to increased output in the latter state. Subsequent developments in East Texas amplify the outlook for increased production there and have already made themselves felt in the general crude markets of the United States. Another interesting turn during February was the decided slump accompanying operations in New Mexico. Completions in Lea County during February only resulted in three new producing wells, with a total initial production of 5465 barrels. In January eight producing wells were completed in Lea County, with a total initial production of 34,508 barrels. As anticipated some time ago, the head is off the Hobbs district and the bringing in of sensational gushers there is a thing of the past.

While there was a further decline in total crude production of the United States in February, the daily average showed an increase over January of 34,850 barrels. Total production in February amounted to 59,572,450 barrels, against 64,874,450 barrels in January. The decline in February was therefore attributed to the fact that the month consisted of but 28 days. The shorter month was, of course, also a factor in the well completion record but the rate of drilling in February was materially less than that for December or January. Oklahoma, Texas, outside of Gulf Coast, Kansas, North Louisiana and Rocky Mountain states recorded increases in daily average crude production during February, while Gulf Coast, Arkansas, Eastern States and California reported declines. Oklahoma and Texas reported the largest gains in daily average production during February, the former being due to increased production at Oklahoma City, while the latter was practically all attributed to the new East Texas area. California production recorded a decline during February of slightly over 8000 barrels a day, with the total for the month approximately 2,000,000 barrels lower.

United States Production

State—	Daily Average February*	Daily Production January	Total Production February*
Oklahoma	472,750	452,000	13,237,000
Texas (outside Gulf Coast)	523,700	511,050	14,664,300
Gulf Coast	185,600	188,850	5,196,100
Kansas	114,450	106,350	3,204,250
North Louisiana	43,900	41,100	1,230,250
Arkansas	49,950	50,700	1,398,600
Eastern States	109,800	110,300	3,074,750
Rocky Mountains	100,100	96,700	2,803,500
California	527,250	535,700	14,763,700
Total	2,127,600	2,092,750	59,572,450

* Preliminary—subject to revision.

United States Field Statistics

Following are the completions, showing oil wells, gas wells, failures and initial production of crude oil and gas by states for February as compiled by THE OIL WEEKLY:

State—	Completions	Producers	Gas wells	Failures	Initial Prod. oil	Initial Prod. gas*
Arkansas	5	2	2	1	205	41¾
California	36	32	..	4	37,385	..
Illinois	7	4	..	3	32	..
Indiana	14	3	5	6	108	2½
Kansas	41	17	7	17	8,530	78½
Kentucky	42	10	16	16	1,022	14¼
Louisiana	49	9	11	29	3,629	288¾
Michigan	15	7	1	7	1,403	1¼
Mississippi	5	..	3	2	....	90
Missouri	1	..	..	1	....	..
New York	5	4	..	1	11	..
New Mexico	3	3	..	..	5,465	2½
Ohio	112	28	55	29	556	45
Oklahoma	107	63	19	25	220,547	359½
Pennsylvania	44	17	20	7	46	45¾
Texas	283	143	20	120	180,866	370
West Virginia	46	6	33	7	33	29¼
Total	815	348	192	275	459,727	1369

* Millions of cubic feet.

Eastern Fields

In the Eastern States, chief interest was centered in the Michigan fields and in the prolific gas area of Mississippi. Isabella County, Michigan, reported the completion of six producing oil wells having a total initial output of 1393 barrels. Hinds County, Mississippi, reported three gas well completions with a total initial volume of 90,000,000 cubic feet. Other more or less important developments in the

Past Twelve Months

The record for the past 12 months is an interesting study for comparative purposes, the following table giving the field statistics for all states:

Month—	Completions	Producers	Gas wells	Failures	Initial Prod.
January, 1930	1,918	1,142	296	480	685,325
February	1,463	881	201	381	990,869
March	1,544	794	220	530	665,535
April	1,702	1,023	180	499	776,024
May	1,973	1,125	228	611	771,977
June	1,679	950	223	506	580,997
July	2,144	1,167	306	671	845,068
August	1,837	930	310	597	1,160,055
September	1,165	619	208	338	833,109
October	1,199	587	245	367	615,002
November	1,253	644	217	392	901,046
December	1,479	650	310	519	979,111
January, 1931	1,156	519	211	426	796,860
February	815	348	192	275	459,727

Note—Rocky Mountain data omitted.

East were the completion of four producing wells in Muskingum County, Ohio, with a total initial of 229 barrels; 11 producing wells in the Bradford, Pennsylvania, field, with a total initial of only 33 barrels of oil; three producing oil wells in Hart County, Kentucky, with a total initial of 755 barrels and one producer in Vigo County, Indiana, with an initial production of 100 barrels. Completions in the Eastern States aggregated 291 wells, of which 79 were producers, having a combined initial production of 3100 barrels. Ohio led all of the Eastern States in number of well completions, with Kentucky and Michigan holding the lead in quantity of new production obtained.

Oklahoma City well completions in February amounted to 33 producers, with a total initial of 201,035 barrels. Total well completions of that state amounted to 107, of which 63 were producers, having a combined initial of 220,547 barrels. McPherson County, Kansas, contributed 6420 barrels of new oil production in February, out of a total for the state of 8530 barrels. The new production came from five producing wells completed there, against 17 in Kansas.

Elwood, California, furnished one sensational well during February with an initial production of 11,000 barrels. Of 36 wells completed in California during February, 32 were producers having a combined initial of 37,385 barrels.

Wildcat operations in North Louisiana and Arkansas during February resulted in the completion of three producers, having a combined initial of 1205 barrels. The total initial of both areas amounted to but 1390 barrels, although 34 wells were completed there during February. The Gulf Coast area of Louisiana and Texas contributed 79 new wells, of which 35 were producers having a combined initial production of 14,672 barrels. Vinton, Louisiana, contributed one producer with 600 barrels, while other sections of that area furnished four producing wells with a combined initial of 1844 barrels. Barbers Hill, Refugio and Spindle Top, contributed 18 new producers, with a total initial of 8380 barrels. The combined Texas Gulf Coast contributed 30 producing oil wells with a total initial of 12,228 barrels. The Refugio field reported 11 producers in February with a total initial of 4505 barrels.

All districts in Texas reported a combined total of 283 new well completions, of which 143 were producers having a total initial of 180,866 barrels. Gray County, in the Texas Panhandle, reported completion of seven producing wells having a combined initial of 3130 barrels. North Young County, North Texas, was credited with 17 producing wells, with a total initial production of 1789 barrels. Darst Creek, in Southwest Texas, reported four producers, with a total initial of 3175 barrels. All new production reported for East Central Texas was obtained in the Van Zandt field, where 12 new producing wells furnished 55,375 barrels of new oil production. Activity in the new Rusk County, East Texas, area resulted in the completion of 17 producing wells, out of 20 completions, with a total initial production of 99,580 barrels. Coleman County, West Central Texas, contributed 880 barrels of new production from four producers, against 1077 barrels from 11 producers in that district. Loving, Howard and Fisher Counties, West Texas, accounted for most of the new production obtained in that part of the state during February. In Loving County, three producers furnished 1145 barrels of new production. Howard County, with one producing well completed, contributed 725 barrels of new production. Fisher County reported two producers with a total of 685 barrels of new production.

SEUBERT EXPLAINS TO MURRAY WHY OKLAHOMA PRICE WAS CUT

(*Continued from page* 96)

"Crude oil buying must be on an equal basis. There can not be one scale of prices for one group of companies and another for their competitors. It is obvious we cannot pay more for crude than our competitors and meet their prices in wholesale and retail markets and equally obvious we cannot expect our patrons to pay more for our production than they pay our competitors.

"Domestic production is responsible for the entire situation. We are in sympathy with your effort to improve the situation and sincerely desire to cooperate in every reasonable way. We will gladly pay more for crude the moment other purchasers are willing to do so but nothing short of fair and united action by all producers in all the big oil producing states will overcome the present situation. Our obligation to the consuming public requires us to follow these economic conditions in spite of our sympathy. We will welcome earliest assurance of improved conditions and hope this meeting of March 9 may mark the turn."

The Oklahoma governor, in addition to his Texarkana conference, has threatened legislation which would outlaw any corporation from the state, provided it imported crude oil and sold its products in the state.

In Kansas, a measure, designed to give that state a proration statute similar to that of Oklahoma, was defeated.

The Oklahoma legislature will shortly pass its judgment on a bill, which would take the enforcement of proration out of the hands of umpire named by the oil companies and place umpires in the employe of the state, with a special tax of one-twentieth of one per cent to defray the expense of proration. This tax would be in addition to the present gross production tax.

One of the first purchasers to meet the new schedule was the Sinclair Refining Company, which previously has posted a price of 67 cents for Oklahoma City oil. H. L. Phillips, president of Sinclair Oil & Gas Company, said the Sinclair buying company was ready to take as much as 50,000 barrels daily at the price and might take even more. The Sinclair-Texas Pipe Line Company is tying its Oklahoma City field line into the station of the Bartex line in the north end of the Oklahoma City pool. The Bartex is the pipe line wing of Phillips Petroleum Company and is a gathering system in the Oklahoma City pool.

Something in the way of permanent relief was assured the stripper wells of southeastern Kansas, following a conference at Wichita. Of the 6300 barrels available, Stanolind Crude Oil Purchasing Company will take 2000 barrels daily; Standard Oil Company of Kansas, 300 barrels; Sinclair Oil & Gas Company, 1000 barrels; Skelly Oil Company, 250 barrels; and Empire Oil & Gas Company, 750 barrels.

Summary of Field Operations, February, 1931

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Recapitulation—United States

States	Completions February	Total Completions Jan.-Feb.	Producers February	Total Producers Jan.-Feb.	Gas Wells February	Total Gas Wells Jan.-Feb.	Failures February	Total Failures Jan.-Feb.	Initial Production Oil February	Initial Production Total Oil Jan.-Feb.	Initial Production Gas* February	Initial Production Total Gas* Jan.-Feb.	Total Production February	Total Production Jan.-Feb.
Oklahoma	107	298	63	160	19	42	25	96	220,547	750,460	359½	509½	13,237,000	27,249,500
Kansas	41	85	17	38	7	19	17	28	8,530	21,780	78½	223½	3,204,250	6,501,700
Texas (outside Gulf Coast)	224	573	113	250	18	57	93	266	168,638	304,394	300	1,087¾	14,664,300	30,506,650
Gulf Coast	79	172	35	96	2	6	42	70	14,672	50,621	70	160½	5,196,100	11,049,650
North Louisiana	29	65	4	14	11	22	14	29	1,185	9,693	288¾	477½	1,230,250	2,503,850
Arkansas	5	20	2	10	2	5	1	5	205	325	41¾	56½	1,398,600	2,970,600
Eastern States	291	644	79	203	133	251	79	190	3,100	12,746	228	431¼	3,074,750	6,493,600
New Mexico	3	17	3	12	..	1	..	4	5,465	40,073	2¼	31¼	b	b
Rocky Mountains	a	a	a	a	a	a	a	a	a	a	a	a	2,803,500	5,800,450
California	36	97	32	84	..	..	4	13	37,385	68,205	...	...	14,763,700	31,370,900
Total	815	1,971	348	867	192	403	275	701	459,727	1,256,587	1,369	2,977¾	59,572,450	124,446,900

*Millions of cubic feet.
(a) Included in Rocky Mountain estimates.
(b) Not Available.

EASTERN STATES

NEW YORK

	Completions	Producers	Gas wells	Failures	Initial Production oil	Initial Production gas*	Total Prod.
Allegany	5	4	..	1	11	..	.....
Total	5	4	..	1	11	..	.....

PENNSYLVANIA

Allegheny	2	1	..	1	1	..	.....
Beaver	1	1	..	..	1	..	.....
Bradford	11	11	..	..	33	..	.....
Butler	3	..	2	1	..	1	.....
Cattaragus	1	..	1	..	..	1	.....
Center-Middle	1	1	..	..	2	..	.....
Clarion-Venango	6	2	3	1	4	1¼	.....
Greene	6	..	4	2	..	1¼	.....
Ontario	2	..	1	1	..	½	.....
Schuyler	1	..	1	..	..	3¾	.....
Washington	10	1	8	1	5	37	.....
Total	44	17	20	7	46	45¾	.....

SOUTHEASTERN OHIO

Jefferson	3	1	..	2	1	..	.....
Monroe	3	..	2	1	..	¾	.....
Morgan	5	..	5	..	..	1¾	.....
Noble	4	1	1	2	1	½	.....
Washington	8	5	2	1	10	¾	.....
Total	23	7	10	6	12	3¾	.....

CENTRAL OHIO

Ashland	9	5	3	1	38	2¾	.....
Athens	6	..	4	2	..	1	.....
Belmont	5	..	4	1	..	1¼	.....
Coshocton	2	2	..	..	105	¾	.....
Fairfield	1	..	1	..	..	¼	.....
Geauga	1	..	..	1	..	..	.....
Hocking	1	..	..	1	..	..	.....
Holmes	2	1	..	1	25	¼	.....
Knox	3	..	2	1	..	1½	.....
Licking	4	1	2	1	10	½	.....
Loraine	5	..	3	2	..	4¾	.....
Medina	9	3	2	4	60	1¼	.....
Meigs	2	..	2	..	..	½	.....
Muskingum	8	4	1	3	229	¼	.....
Perry	6	..	3	3	..	1¼	.....
Stark	5	..	5	..	..	10	.....
Summit	5	..	5	..	..	12¼	.....
Wayne	3	2	1	..	59	½	.....
Total	77	18	38	21	526	39	.....

* Millions of cubic feet.

NORTHWESTERN OHIO

Hardin	7	3	4	..	18	1½	.....
Seneca	4	..	2	2	..	½	.....
Wyandot	1	..	1	..	..	¼	.....
Total	12	3	7	2	18	2¼	.....
Total Ohio	112	28	55	29	556	45	.....

ILLINOIS

Crawford	3	2	..	1	23	..	.....
Monroe	2	..	..	2	..	..	.....
St. Clair	2	2	..	..	9	..	.....
Total	7	4	..	3	32	..	.....

KENTUCKY

	Completions	Producers	Gas wells	Failures	Initial Production oil	Initial Production gas*	Total Prod.
Barren	6	..	6	..	..	6½	.....
Daviess	1	..	..	1	..	..	.....
Hancock	8	4	3	1	190	2	.....
Hart	17	3	4	10	755	3¾	.....
McLean	3	3	..	..	77	..	.....
Metcalf	1	..	1	..	..	½	.....
Ohio	3	..	2	1	..	1½	.....
Warren	2	..	..	2	..	..	.....
Webster	1	..	..	1	..	..	.....
Total	42	10	16	16	1,022	14¼	.....

INDIANA

Blackford	1	1	..	..	3	..	.....
Daviess	2	..	1	1	..	½	.....
Gibson	1	..	..	1	..	..	.....
Madison	2	..	2	..	..	1	.....
Perry	1	..	..	1	..	..	.....
Pike	3	..	..	3	..	..	.....
Sullivan	2	..	2	..	..	1	.....
Vandeburg	1	1	..	..	5	..	.....
Vigo	1	1	..	..	100	..	.....
Total	14	3	5	6	108	2½	.....

WEST VIRGINIA

Boone	6	..	5	1	..	5¼	.....
Calhoun	5	..	5	..	..	4	.....
Clay	2	..	2	..	..	¾	.....
Doddridge	1	..	1	..	..	½	.....
Gilmer	2	..	1	1	..	1¼	.....
Jackson	1	1	..	..	5	..	.....
Kanawha	6	1	4	1	5	3¾	.....
Lewis	1	..	1	..	..	¼	.....
Logan	2	..	..	2	..	..	.....
Marion	1	..	1	..	..	½	.....
Marshall	4	..	4	..	..	7½	.....
Mingo	3	..	3	..	..	1	.....
Monongalia	2	..	2	..	..	¾	.....
Ritchie	4	..	2	2	..	¾	.....
Roane	1	..	1	..	..	1½	.....
Wetzel	2	1	1	..	10	1½	.....
Wood	3	3	..	..	13	..	.....
Total	46	6	33	7	33	29¼	.....

MISSOURI

St. Louis	1	..	..	1	..	..	.....
Total	1	..	..	1	..	..	.....

MISSISSIPPI

Hinds	3	..	3	..	..	90	.....
Neshoba	1	..	..	1	..	..	.....
Rankin	1	..	..	1	..	..	.....
Total	5	..	3	2	..	90	.....

MICHIGAN

Allegany	2	..	..	2	..	..	.....
Isabella	8	6	1	1	1,393	1¼	.....
Mecosta	2	..	..	2	..	..	.....
Muskegon	2	..	..	2	..	..	.....
Oceana	1	1	..	..	10	..	.....
Total	15	7	1	7	1,403	1¼	.....
Total Eastern States	291	79	133	79	3,100	228	3,074,750

OKLAHOMA

Allen	..	..	..	..	..	..	375,900
Asher	..	..	..	..	..	..	19,600
Blackwell	..	..	..	..	..	..	77,350

	Completions	Producers	Gas wells	Failures	Initial oil	Production gas*	Total Prod.
Bowlegs	..	..	..	..	..	..	351,050
Braman	..	..	..	..	..	..	53,200
Bristow-Slick	..	..	..	..	..	..	344,400
Burbank	..	..	..	..	..	..	378,000
Carr City	..	..	..	..	..	..	357,350
Carter	6	5	..	1	1,420	..	.....
Creek	9	4	2	3	315	3¼	.....
Cromwell	..	..	..	..	..	..	134,400
Cushing	..	..	..	..	..	..	354,650
Davenport	..	..	..	..	..	..	25,200
Duncan	..	..	..	..	..	..	195,300
Earlsboro	..	..	..	..	..	..	470,750
East Earlsboro	..	..	..	..	..	..	512,400
East Little River	..	..	..	..	..	..	274,050
East Seminole	..	..	..	..	..	..	49,000
Fox	..	..	..	..	..	..	26,600
Garber	..	..	..	..	..	..	113,050
Graham	..	..	..	..	..	..	80,500
Healdton	..	..	..	..	..	..	287,000
Hewitt	..	..	..	..	..	..	169,050
Hubbard	..	..	..	..	..	..	26,600
Hughes	1	..	1	..	..	71	.....
Konowa	..	..	..	..	..	71	432,950
Latimer	2	..	2	..	..	4	.....
LeFlore	1	..	..	1	..	..	.....
Lincoln	1	1	..	..	1,895	..	.....
Little River	..	..	..	..	..	..	675,400
Logan	..	..	..	..	..	..	109,200
Love	1	..	..	1	..	..	.....
Marshall	1	1	..	..	10	..	.....
Maud	..	..	..	..	..	..	71,400
Mission	..	..	..	..	..	..	179,900
Muskogee	9	1	3	5	20	3¾	.....
North Okmulgee	..	..	..	..	..	..	200,550
Okfuskee	3	..	2	1	..	10	.....
Oklahoma County	33	33	..	..	201,035	57	.....
Oklahoma City	..	..	..	..	..	..	2,513,000
Okmulgee	4	1	..	3	20	..	.....
Osage	..	..	..	..	..	..	633,500
Papoose	..	..	..	..	..	..	57,750
Payne	4	3	1	..	120	5½	.....
Pearson	..	..	..	..	..	..	15,750
Pittsburg	3	..	3	..	..	23½	.....
Pontotoc	2	2	..	..	445	..	.....
Pottawatomie	2	..	..	2	..	..	.....
St. Louis	..	..	..	..	..	..	572,950
Sasakwa	..	..	..	..	..	..	109,550
Scholem-Alechem	..	..	..	..	..	..	359,100
Searight	..	..	..	..	..	..	152,950
Seminole County	15	8	3	4	15,095	181	.....
Seminole	..	..	..	..	..	..	373,450
South Earlsboro	..	..	..	..	..	..	214,200
South Okmulgee	..	..	..	..	..	..	126,700
Thomas	..	..	..	..	..	..	16,800
Tonkawa	..	..	..	..	..	..	142,100
Tulsa	4	4	..	..	172	..	.....
Wagoner	6	..	2	4	..	1½	.....
West Asher	..	..	..	..	..	..	226,800
Wewoka	..	..	..	..	..	..	295,050
Yale-Jennings	..	..	..	..	..	..	176,750
Others	..	..	..	..	..	..	935,900
Total	107	63	19	25	220,547	359½	13,237,000

KANSAS

Augusta-Fox-Bush	..	..	..	..	..	..	86,450
Barber	2	..	1	1	..	5	.....
Butler	4	3	..	1	625	..	.....
Chase	1	.	..	1	..	..	.....
Churchill	..	..	..	..	..	..	108,850
Cove	1	..	..	1	..	..	.....
Cowley	3	1	..	2	15	..	.....
El Dorado-Towanda	..	..	..	..	..	..	368,200
Ellis	1	..	..	1	..	..	.....
Ellsworth	1	.	..	1	..	..	.....
Florence-Covert	..	..	..	..	..	..	22,050
Greenwood	1	..	..	1	..	..	476,400
Kingman	2	1	..	1	215	..	.....
Kiowa	1	..	..	1	..	..	.....
McPherson	11	5	5	1	6,420	67½	.....
Oxford	..	..	.	..	..	..	66,850
Pawnee	1	..	..	1	..	..	.....
Peabody-Ebling	..	..	..	..	..	..	45,500
Pratt	1	..	.	1	..	..	.....
Rainbow Bend	..	..	..	..	..	..	34,300
Rice	2	1	..	1	135	..	.....
Russell	1	1	..	..	310	..	89,950
Sedgwick County	6	4	..	2	750	..	.....
Sedgwick	..	..	..	..	..	..	572,600
Stevens	1	..	1	..	..	6	.....
Sumner	1	1	..	..	60	..	.....
Voshell	..	..	..	..	..	..	615,300
Others	..	..	..	..	..	..	717,500
Total	41	17	7	17	8,530	78½	3,204,250

CALIFORNIA

Athens-Rosecrans	1	1	..	..	40	..	.....
Dominguez	1	1	..	..	4,600	..	303,800
Elwood	1	1	..	..	11,000	..	.....
Elwood-Goleta	..	..	..	..	..	..	868,000
Huntington Beach	..	..	..	..	..	..	602,700
Inglewood	1	1	..	..	200	..	424,900
Kern Front	1	1	..	..	200	..	.....
Kettleman Hills	1	1	..	..	5,200	..	753,900
Long Beach	12	12	..	..	5,475	..	2,593,500
Midway-Sunset	..	..	..	..	..	..	1,483,300
Mt. Poso	1	1	..	..	70	..	.....
Playa del Rey	11	11	.	..	8,600	..	917,700
Santa Fe Springs	..	..	..	..	..	..	1,992,900
Seal Beach	..	..	..	..	..	..	422,800
Ventura	2	2	..	..	2,000	..	1,253,000
Wildcats	4	..	..	4	..	..	.....
Others	..	..	..	..	..	..	3,147,200
Total	36	32	..	4	37,385	..	14,763,700

MOUNTAIN STATES

WYOMING

	Completions	Producers	Gas wells	Failures	Initial oil	Production gas*	Total Prod.
Big Muddy	..	..	..	..	..	..	53,550
Elk Basin	..	..	..	..	..	..	18,550
Grass Creek	..	..	.	..	..	..	59,150
La Barge	..	..	..	..	..	..	46,550
Lance Creek	..	..	..	..	..	..	4,900
Lost Soldier	..	..	..	..	..	..	138,250
Oregon Basin	..	.	..	..	..	..	53,200
Rock Creek	..	..	..	..	..	..	56,000
Salt Creek	..	..	..	..	..	..	750,750
Others	..	..	..	..	..	..	116,900
Total	..	.	..	..	..	..	1,297,800

MONTANA

Cat Creek	..	..	..	..	..	..	30,800
Pondera	..	..	.	..	..	..	52,850
Sunburst	..	..	..	..	..	..	126,000
Others	..	..	..	..	..	..	30,450
Total	..	..	..	..	..	..	240,100

COLORADO

Florence	..	..	..	..	..	..	11,900
Fort Collins	..	..	..	..	..	..	30,100
Moffats	..	..	..	..	..	..	30,450
Others	..	.	..	..	..	..	49,700
Total	..	..	..	..	..	..	122,150

NEW MEXICO

Artesia	..	..	..	..	..	..	17,500
Eddy	..	..	..	..	..	..	2,450
Hobbs High	..	..	..	..	..	..	901,250
Hogback	..	..	..	..	..	..	12,600
Lea	3	3	..	..	5,465	2½	177,450
Rattlesnake	..	.	..	..	..	..	29,400
Table Mesa	..	..	..	..	..	..	2,800
Total	3	3	.	..	5,465	2½	1,143,450
Total Rocky Mts.	3	3	..	..	5,465	2½	2,603,500

ARKANSAS

Champagnolle	..	..	..	..	..	..	125,650
El Dorado	..	..	.	..	..	..	107,100
Lisbon	..	..	..	..	..	..	21,700
Nevada	..	..	..	..	..	..	28,000
Smackover Heavy	..	..	..	..	..	..	937,650
Smackover Light	..	.	..	..	..	..	123,900
Stephens	..	..	..	..	..	..	23,800
Union	1	..	1	..	..	¼	.....
Wildcats	4	2	1	1	205	41½	.....
Others	..	..	..	..	..	..	30,800
Total	5	2	2	1	205	41¾	1,398,600

NORTH LOUISIANA

Bossier	2	.	2	..	..	28½	.....
Caddo	2	2	..	..	135	..	.....
Caddo Heavy	..	..	..	..	..	..	79,100
Caddo Light	..	..	..	..	..	..	228,550
Carterville	..	..	..	..	..	..	49,000
Cotton Valley	..	..	..	..	..	..	51,800
De Soto-Red River	..	..	..	..	..	..	76,650
Haynesville	..	..	..	..	..	..	157,500
Holly	..	..	..	..	..	..	20,650
Homer	..	..	..	..	..	..	93,800
Ouachita	1	..	1	..	..	3½	.....
Richland	6	..	5	1	..	147½	.....
Sabine	2	1	..	1	50	..	.....
Urania	..	..	..	..	..	..	136,500
Zwolle	..	..	..	..	..	..	295,050
Wildcats	16	1	3	12	1,000	110¼	.....
Others	..	..	.	..	..	..	41,650
Total	29	4	11	14	1,185	288¾	1,230,250

LOUISIANA GULF COAST

Assumption	1	..	..	1	..	..	.....
Bay Junop	1	.	..	1	..	..	.....
Bayou Bouillon	..	.	..	..	..	..	3,150
Bay St. Elaine	1	..	..	1	..	..	.....
East Hackberry	1	..	..	1	..	..	79,450
Edgerly	1	1	..	..	400	..	21,000
Evangeline	..	.	..	..	..	..	16,800
Garden Island Bay	2	..	..	2	..	..	.....
Hackberry	..	..	..	..	..	..	21,350
Hager Dome	3	.	..	3	..	..	.....
Leesville	1	1	..	..	480	..	.....
Lake Barre	..	..	..	..	..	..	87,850
Lockport	1	1	..	..	412	..	132,300
Port Barre	1	..	..	1	..	..	47,950
Sorrento	..	..	..	..	..	..	1,400
Starks Dome	1	1	..	..	552	..	.....
Sulphur	..	..	..	..	..	..	55,650
Sweet Lake	1	.	..	1	..	..	31,150
Vinton	2	1	..	1	600	..	163,450
West Felician	1	..	..	1	..	..	.....
White Castle	2	..	..	2	..	..	26,600
Others	..	..	..	..	..	..	63,350
Total	20	5	..	15	2,444	..	751,450
Total Louisiana	49	9	11	29	3,629	288¾	1,981,700

Texas Recapitulation

	Completions	Producers	Gas Wells	Failures	Initial Production Oil	Initial Production Gas*	Total Production
Panhandle	18	12	4	2	3,479	59½	1,521,450
South Texas	27	15	6	6	3,813	185½	2,185,050
North Texas	84	31	..	53	2,319	...	1,676,850
East Texas	20	17	1	2	99,580	36	.....
East Central Texas	16	12	..	4	55,375	...	1,745,100
West Central Texas	36	11	6	19	1,077	17	683,900
West Texas	23	15	1	7	2,995	2	6,851,950
Total Texas (Outside Gulf Coast)	224	113	18	93	168,638	300	14,664,300
Gulf Coast	59	30	2	27	12,228	70	4,444,650
Grand Total	283	143	20	120	180,866	370	19,108,950

*Millions of Cubic Feet.

TEXAS GULF COAST

	Completions	Producers	Gas wells	Failures	Initial Production oil	Initial Production gas*	Total Prod.
Allen Dome	1	..	..	1	..	..	.....
Austin County	1	..	..	1	..	..	.....
Barbers Hill	3	3	..	..	2,235	..	633,150
Batson	..	..	..	..	..	..	27,650
Big Creek	1	..	..	1	..	..	77,000
Blue Ridge	..	..	..	..	..	..	37,100
Boling	2	..	..	2	..	..	22,050
Clay Creek	3	..	..	3	..	..	.....
Damon Mound	..	..	..	..	..	..	17,150
Esperson	..	..	..	..	..	..	63,350
Fannett	..	..	..	..	..	..	22,400
Goose Creek	..	..	..	..	..	..	118,300
Hankamer	..	..	..	..	..	..	69,300
High Island	1	1	..	..	540	..	.....
Hockley	1	..	..	1	..	..	.....
Hull	2	1	..	1	125	..	184,450
Humble	3	1	..	2	450	..	277,550
Lavaca	1	..	..	1	..	..	.....
Lochridge	1	..	..	1	..	..	.....
Long Point	1	..	..	1	..	..	.....
Lost Lake	1	..	..	1	..	..	.....
Moss Bluff	2	..	..	2	..	..	9,100
Mykawa	1	1	..	..	41	..	.....
North Dayton	1	1	..	..	300	..	15,050
Orange	1	1	..	..	30	..	55,050
Orchard	..	..	..	..	..	..	59,500
Pettus	..	..	..	..	..	..	205,800
Pierce Junction	2	2	..	..	1,440	..	248,150
Port Neches	..	..	..	..	..	..	42,700
Raccoon Bend	3	2	..	1	862	..	241,150
Refugio	15	11	2	2	4,505	70	943,600
Saratoga	2	2	..	..	60	..	26,600
Somerville	..	..	..	..	..	..	59,150
Sour Lake	..	..	..	..	..	..	57,050
South Liberty	..	..	..	..	..	..	71,750
Spindle Top	5	4	..	1	1,640	..	326,150
Sugar Land	..	..	..	..	..	..	338,800
Washington	2	..	..	2	..	..	.....
West Columbia	..	..	..	..	..	..	118,300
Wildcats	3	..	..	3	..	..	.....
Others	..	..	..	..	..	..	55,300
Total	59	30	2	27	12,228	70	4,444,650

PANHANDLE TEXAS

Carson	3	3	..	..	99	3	107,450
Childress	1	..	..	1	..	..	.....
Gray	10	7	2	1	3,130	43½	1,146,600
Hutchinson	4	2	2	..	250	13	249,200
Wheeler	..	..	..	..	..	..	9,450
Others	..	..	..	..	..	..	8,750
Total	18	12	4	2	3,479	59½	1,521,450

NORTH TEXAS

Archer	12	3	..	9	100	..	348,600
Burkburnett	..	..	..	..	..	..	211,750
Cooke	2	1	..	1	10	..	.....
Denton	1	..	..	1	..	..	.....
Electra	..	..	..	..	..	..	243,250
Foard	1	..	..	1	..	..	.....
Grayson	2	..	..	2	..	..	.....
Haskell	1	..	..	1	..	..	.....
KMA-Iowa Park	..	..	..	..	..	..	104,650
Montague	1	..	..	1	..	..	175,000
North Young	51	17	..	34	1,789	..	245,700
Throckmorton	2	..	..	2	..	..	.....
Wichita	10	10	..	..	420	..	.....
Wilbarger	1	..	..	1	..	..	305,550
Others	..	..	..	..	..	..	42,350
Total	84	31	..	53	2,319	..	1,676,350

SOUTH TEXAS

Bee	1	.	1	..	..	45	.....
Bexar	1	1	..	..	5	..	.....
Bloomington	1	..	1	..	..	30	.....
Chapman	1	1	..	..	200	..	163,450
Dale	..	..	..	..	..	..	7,000
Darst Creek	4	4	..	..	3,175	..	873,250
Duval	3	1	1	1	10	20	.....
Karnes	1	..	..	1	..	..	.....
Laredo District	..	..	..	..	..	..	378,000
Live Oak	2	1	..	1	63	..	.....
Luling	..	..	..	..	..	..	270,200
Lytton Springs	..	..	..	..	..	..	19,950
Nueces	1	1	..	..	60	40	.....
Salt Flat	..	..	..	..	..	..	421,400
Somerset	..	..	..	..	..	..	36,400
Webb	1	..	..	1	..	..	.....
Zapata	10	6	2	2	300	35	.....
Zavalla	1	..	1	..	..	15½	.....
Others	..	..	..	..	..	..	15,400
Total	27	15	6	6	3,813	185½	2,185,050

EAST CENTRAL TEXAS

Boggy Creek	..	..	..	..	..	..	71,400
Corsicana-Powell	..	..	..	..	..	..	137,550
Currie	..	..	..	..	..	..	8,750
Joiner-Bradford-Rusk-Gregg	..	..	..	..	..	..	550,900
Limestone	1	..	..	1	..	..	.....
Mexia	..	..	..	..	..	..	107,100
Nigger Creek	..	..	..	..	..	..	4,550
Richland	..	..	..	..	..	..	3,150
Van Zandt	12	12	..	..	55,375	..	843,150
Wortham	3	..	..	3	..	..	17,150
Wildcats	..	..	..	..	..	..	.....
Others	..	..	..	..	..	..	1,400
Total	16	12	..	4	55,375	..	1,745,100

EAST TEXAS

Rusk	19	17	..	2	99,580	..	.....
Wildcats	1	..	1	..	..	36	.....
Total	20	17	1	2	99,580	36	.....

WEST CENTRAL TEXAS

Brown	4	1	..	3	2	..	108,150
Callahan	4	1	..	3	15	..	46,900
Coleman	9	4	1	4	880	1	26,250
Comanche	1	..	..	1	..	..	.....
Eastland	4	2	1	1	150	¾	106,750
Jack	1	..	1	..	..	3	28,350
Palo Pinto	1	..	1	..	..	1¼	11,200
Shackelford	5	2	1	2	15	¼	109,550
Stephens	5	1	1	3	15	11¾	130,550
Throckmorton	..	..	..	..	..	..	15,050
South Young	2	..	..	2	..	..	67,200
Others	..	..	..	..	..	..	33,950
Total	36	11	6	19	1,077	17	683,900

WEST TEXAS

Crane	1	1	..	..	300	..	684,950
Crockett	1	1	..	..	80	..	52,850
Ector	..	..	..	..	..	..	173,250
Fisher	3	2	..	1	685	..	.....
Howard	1	1	..	..	725	..	742,350
Jones	1	..	..	1	..	..	33,600
Loving	3	3	..	..	1,145	..	.....
Mitchell-Scurry	..	..	..	..	..	..	54,950
Pecos	4	3	1	..	125	2	96,600
Reagan	1	..	..	1	..	..	854,700
Upton	3	2	..	1	145	..	.....
Ward	2	2	..	..	190	..	.....
Winkler	..	..	..	..	..	..	1,425,550
Yates	..	..	..	..	..	..	2,549,400
Wildcats	3	..	..	3	..	..	.....
Others	..	..	..	..	..	..	183,750
Total	23	15	1	7	2,995	2	6,851,950

Completions for Past Week in U. S. Fields

▼ ▼ ▼

For Tabulation and Comparison See Market Section

CALIFORNIA

Company, Well and Location	Initial Production Bbls.	Depth
LONG BEACH—		
Richfield Oil Co., Bernstein 6	500	5330
Shell Oil Co., Hamilton 4	275	4240
PLAYA DEL REY—		
Union Oil Co., Townsite 7	500	5920
West Coast Pet. Combinations, No. 3	300	4505

OKLAHOMA

Company, Well and Location	Initial Production Bbls.	Depth
CREEK COUNTY—		
A. A. Bailey and Johnson, Weaver 3, sw nw nw 18-19-9e	25	2189
Gled Oil Co., Travis 1, ne c se ne 13-19-8e	170	2185
Dixie Drlg. Co., Lewis 1, ne c 7-14-10e	*	3443
Fogle et al, Strip 2, sw ne sw 24-19-7e	*	2757
Burton and Holmes, Snakeye 1, se c sw sw 5-18-10e	*	2301
HUGHES COUNTY—		
Empire O&R et al, Scroggins 1, sw se se 20-7-8e	*	4262
MUSKOGEE COUNTY—		
Robinson Oil Co., Brown 1, se c ne 18-13-16e	8	2057
John Aggas, Hawkins 6, sw c nw se 28-16-15e	¶1¼	1393
D. L. T. Oil Co. et al, Mackey 2, se sw sw 9-15-18e	5	1011
OKLAHOMA COUNTY—		
Slick Estate, Whitefield 1, sw c se se 34-12-3w (4hr)	7940	6230
Sunray Oil Co., Mead 1, se c 34-12-3w	20320	6245
Empire O&R, Refinery Site 1, sw c se ne nw 31-11-3w	8710	6312
Anderson-Prichard Oil Corp. and Phillips, Sandness 1 se c ne se nw 10-11-3w	6520	6316
I.T.I.O. et al, Terrace Lawn 1, cnl ne 10-11-3w	6195	6273
View Point 2, se sw se 10-11-3w	5665	6390
Phillips Pet. Co., Blazier 1, nw c ne se nw 10-11-3w	8230	6320
Nunn 1, ne c se ne nw 10-11-3w	11000	6323
Sinclair O&G, School Land 7, ne nw se 36-11-3w	215	6443
OKMULGEE COUNTY—		
Keithly et al, Harris 3, (owd) se ne se 1-14-14e	*	1857
PITTSBURG COUNTY—		
Midwestern O&G, White 1, se ne se 8-7-18e	¶21¾	1891
PONTOTOC COUNTY—		
Benedum & Trees, Burk 1, sw c 28-5n-5e	70	2330
POTTAWATOMIE COUNTY—		
Strapp & King, Townsite 1, sw c nw 8-9-5e	20	4337
Twin State Oil Co., Archer 4, ne nw se 22-6-3e	1530	3567
SEMINOLE COUNTY—		
Deep Rock Oil, Douglas 4, se c nw 30-8-8e	10880	3930
Mid-Kansas O&G and Ramsey Pet., Davis 4, nw se nw 30-8-8e	4407	3970
Deep Rock Oil, Douglas 3, ne c sw 30-8-8e	4820	3080
Douglas 5, nw c se 30-8-8e	970	3125
Mid-Continent Pet. Corp., Harjo 1, sw ne nw 6-5-6e	*	2730
TULSA COUNTY—		
McDonigal et al, Thompson-Cowan 1, sw c nw sw 7-19-14e	7	1270
Chandler et al, McIntosh 2, ne c 29-19-14e	¶23¼	1296
WAGONER COUNTY—		
P. Boyle et al, Ballard 1, cwl se ne 16-16-15e	*	1780

KANSAS

Company, Well and Location	Initial Production Bbls.	Depth
GOVE COUNTY—		
Johnson and Atlantic Oil Prod .Co., Wright 1, c se ne 11-12-27w	*	4861
GREENWOOD COUNTY—		
Simmons et al, Inthurm 2, sw se se 19-22-12e	*	1965
MARION COUNTY—		
Youker et al, Riffel 2, sw c 11-17-4e	70	2312
McPHERSON COUNTY—		
Otstot et al, Munn 2, sw c 6-20-1w	1100	2967
Lario O&G and Shell, Miller 4, nw c se 1-20-2w	2795	2977
Madison and Shell Pet., Unruh 1, nw c se 31-19-1w	¶8¾	2926
C. B. Davis, Shell et al, Ritz 1, se c sw 19-19-1w	1680	3427
McPherson O&G Dev. Co., Finkle 1, c ne nw 23-19-2w	¶14½	2925
Barnsdall Oil Co. and The Texas Co., Aelmore 1, c ne ne 22-19-2w	210	2934
Carey and Shell, Smith 1, c ne sw 15-19-2w	210	2968
McPherson O&G Dev. Co., Meryers "B" 1, c se 14-19-2w	¶30	2899
Tidal Oil Co., Estate of T. B. Slick, Pryor and Lockhart, Peel 1, c sw sw 35-17-3w	*	3646
MORRIS COUNTY—		
Urshell et al, Scott 1, (owd) ne c sw 6-16-6e	*	2875
SEDGWICK COUNTY—		
Blankenship Pet. Corp., Shaffer 1, ne c nw 30-27-2e (16h)	440	3247
Vickers Pet. Co., Keys 2, nw c ne 30-27-2e	300	3248
Fisher and Lauck, Trustee 2, (owd) sw c se 19-27-2e	200	3242
Magnolia Pet. Co., Vickers 2, nw sw sw 17-27-2e	350	2941

EASTERN STATES

PENNSYLVANIA

Company, Well and Location	Initial Production Bbls.	Depth
BUTLER COUNTY—		
Linsey & Co., Linsey Hrs. 1	*	1551
TIOGA COUNTY—		
Penn-United Gas Co., Ben H. Meeker 1	¶64	4197

WEST VIRGINIA

Company, Well and Location	Initial Production Bbls.	Depth
CALHOUN COUNTY—		
F. F. McIntosh, Shock 1	¶1	2215
W. H. Bickel, Collins 3	¶1	2072
Bennett Hrs. 3	¶½	....
A. H. Jackson, Louden 1	¶1	....
Means 1	¶½	1735
MONONGALIA COUNTY—		
Chartiers Oil Co., Wilson 1	5	....
Manufacturers Light & Heat Co., Garrison 2797	¶¼	3439
KANAWHA COUNTY—		
United Fuel Gas Co., Ray 4278	¶ ¼	2165
Ten Mile Oil & Gas Co., Dickinson 14	¶1½	....
RITCHIE COUNTY—		
Day O'Day Estate, Deems 4	50	....
TYLER COUNTY—		
Barkley-McKay Co., Wright 1	2	1944
BOONE COUNTY—		
G. L. Cabot Inc., Federal Coal Co. 30	¶4½	2316
LEWIS COUNTY—		
Frye & McCracken, Knight 1	¶13¼	3003
WETZEL COUNTY—		
Manufacturers Light & Heat Co., Freeland 3465	¶2½	3000
CABELL COUNTY—		
United Fuel Gas Co., Beem 4310	¶1	3192
WAYNE COUNTY—		
Wayne United Gas Co., Fee 48	¶¼	1449
ROANE COUNTY—		
Central States Gas Co., White 1	*	1551
HANCOCK COUNTY—		
Hupp, Duff & Co., C. Bolling 1	25	....
Bates 3	50	355
Kentucky Natural Gas Co., Hendricks 1	6	....
CALDWELL COUNTY—		
Crow & Co., Farmersville Dome 1	50	650
Done 2	100	....
HART COUNTY—		
Smith, Daugherty & Co., Larimore 1	350	....
BARREN COUNTY—		
Norris & Davis, Wilcoxon 1	¶½	....
McLEAN COUNTY—		
Pampas Oil & Gas Co., Stephens 1.	*	1180
Johnson Oil & Refining Co., Howard 1	5	1185
MUHLENBERG COUNTY—		
The Ohio Oil Co., Brown 1	*	....
DAVIESS COUNTY—		
E. L. Newton & Co., Trunnel 1	*	....

SOUTHEASTERN OHIO

Company, Well and Location	Initial Production Bbls.	Depth
WASHINGTON COUNTY—		
J. T. Clarey & Co., Morningstar 2	5	622
Bules Oil Co., Bules 1	¶¼	1284
MORGAN COUNTY—		
Long & Campbell, Alexander 28	¶¼	1437
Ohio Fuel Gas Co., Kennard 3	¶¼	1423
White 1	¶¼	1305
NOBLE COUNTY—		
Shay McMullen, English 1	¶¼	1730
JEFFERSON COUNTY—		
Local Oil Syndicate, Carr 2	*	1400

CENTRAL OHIO

Company, Well and Location	Initial Production Bbls.	Depth
ATHENS COUNTY—		
Grass Run Oil Co., Devore 1	1	1070
Bowser & Co., Riley 2	¶¼	555
Frank O'Mara & Co., Nelsonville Brewery tract 1	¶1½	3255
TUSCARAWAS COUNTY—		
Capital Drilling Co., Asher 4	10	3650
Gordon Oil Co., Hogue 1	¶1	3613
LICKING COUNTY—		
Fred Eshleman, Eshleman 1	¶¼	633
Armbruster & Co., Stickler 9	¶¼	632
WAYNE COUNTY—		
Ohio Fuel Gas Co., Hageman 3	¶1	....
FAIRFIELD COUNTY—		
Gas Producing Co. of Ohio, Holliday 1	10	1977
PERRY COUNTY—		
Bell & Shaw, Stanberry 1	¶¼ and 5	3375
STARK COUNTY—		
Timken & Co., Snyder 1	*	5280
MEDINA COUNTY—		
Myers Oil Co., Keener 1	*	2756
LAKE COUNTY—		
G. G. Trowbridge, Trowbridge 1	*	3167
LORAIN COUNTY—		
Dillon & McFredericks 1	*	2666
MUSKINGUM COUNTY—		
The Atha Co., White 1	¶¼	4083

NORTHWESTERN OHIO

Company, Well and Location	Initial Production Bbls.	Depth
SENECA COUNTY—		
Honey Creek Oil Co., Berten 1	5	2375
Industrial Gas Co., Stahl 3	¶¼	....
Sandusky Gas Co., Rosenberger 2	¶¼	....
Rosenberger 3	¶¼	....
Schlachter & Co. 2	¶¼	....
Schlachter & Co. 3	¶¼	....

INDIANA

Company, Well and Location	Initial Production Bbls.	Depth
VIGO COUNTY—		
The Ohio Oil Co., Prevo 2	60	2227
Siosi Oil Corporation, Riggs 20	55	2218

ILLINOIS

Company, Well and Location	Initial Production Bbls.	Depth
ST. CLAIR COUNTY—		
Majestic Oil Co., Inglehart 1	*	705
Fisher 1	*	110
Dupo Oil Investment Co., Zebos 1	*	315
W. S. Avery, Ruble 1	*	575

MICHIGAN

Company, Well and Location	Initial Production Bbls.	Depth
ISABELLA COUNTY—		
Mellon-Pollock Oil Co., Eddy Estate 1	*	....

ARKANSAS

Company, Well and Location	Initial Production Bbls.	Depth
UNION COUNTY (Smackover)—		
Lion O. R. Co., Alphin A-5, 17-16-15 (sec. comp.)	20	2391
Hayes B-11, 3-16-15 (sec. comp.)	50	2287
Hayes B-15, 3-16-15 (sec. comp.)	40	2275

NORTH LOUISIANA

RICHLAND PARISH—		
United Prod. Corp., Woolfe A-1, 35-17-6e	¶38	2448
Woolfe B-1, 34-17-6e	¶46	2450

LOUISIANA GULF COAST

BAYOU DES GLAISE—		
Standard of La., Wilbert 8	*	4295
SULPHUR—		
Union Sulphur Co., Fee 749	188	4117
VINTON—		
Freeport Sulphur Co., Gray 1	*	822
Vinton Pet. Co., Gray 10	300	3500

TEXAS GULF COAST

BARBERS HILL—		
Humphreys Corp., Kirby 10-A	*	6955
Sloane Pros. Co., Ulrich 2	*	5520
EDNA—		
Warner-Quinlan, Hungerford 1	*	4514
ESPERSON—		
Cranfill-Reynolds, Esperson 18	450	3070
Moores Bluff 8	100	2320
GRIMES—		
Humble O&R Co., Cienski 1-A	*	1591
HARDIN—		
W. N. Hooks, Walton 1	*	1145
GAY HILL—		
Sun Oil Co. ,Marcus 2	115	1240
Eimar 3	*	1951
Witt 5	125	1273
MOSS BLUFF—		
Texas Gulf Sulphur Co., Carter 2	*	1167
Deering & Kayser, Pruitt 8	*	1238
J. R. Ingram, Hornbeck 1	*	5633
ORANGE—		
Gulf Prod. Co., Miller-Vidor 1	*	6500
MYKAWA—		
Humble O&R Co., Minnetex 4	*	6500
PIERCE JUNCTION—		
Navarro Oil Co., Perry 2	1080	4308

SOUTH TEXAS

BEE COUNTY (Pettus)—		
United Prod. Co.'s Ray 34	325	3953
DUVAL COUNTY—		
Vacuum Oil Co. & S. R. & C. Oil Co.'s Duval County Land Co. 3	*	1830
GUADALUPE COUNTY—		
Luling O&G Co.'s Mrs. F. Nixon	*	3215
HAYS COUNTY—		
Harley & Whittington's Heidenreich 1	*	2767
NUECES COUNTY—		
V. F. Neuhaus et al's Bauer 1	*	5507
ZAPATA COUNTY—		
John J. O'Hern's S. Benavides 2	*	1702

WEST TEXAS

CRANE COUNTY—		
C. C. Duffey-Gulf Prod. Co., Cowden 1	*	2575
LOVING COUNTY—		
The California Co., Reagan-McElvain 7	365	4360
H. W. Martin et al, Wheat-Russell 1	825	4218
PECOS COUNTY—		
Corvette Oil Corp., Tippett-Humble 3	140	514
WARD COUNTY—		
Empire Gas & Fuel Co., Sealy 1	30	2615
WINKLER COUNTY—		
Magnolia Pet. Co., Bashara Est. 1	9	3109

TEXAS PANHANDLE

GRAY COUNTY—		
Barker & Bourland, Dial 1	¶2	3003
Dixon Creek O&R Co., Castleberry 9	80	3279
WHEELER COUNTY—		
Devore & Robinson, Sitter 1	¶63	2193

NORTH TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
ARCHER COUNTY—		
Moran Drlg. Co. et al, Davidson 1	*	802
COLLIN COUNTY—		
Breckenridge Oil Co., McPheran 1	*	393
COOKE COUNTY—		
Deep Rock Oil Corp. et al, Felkner 1	*	1632
THROCKMORTON COUNTY—		
York et al, Brockman 1	*	1300
WICHITA COUNTY—		
R .R. Clark et al, Bickley 13	80	877
NORTH YOUNG COUNTY—		
Banner et al, Routon (Sec. 181) 1	*	905
Brazelton et al, Masonic Home 1	*	800
C. B. Chandler et al, Fisher 1	*	802
Deats & Ellis, Jeffrey 1	*	927
Deep Oil Dev. Co., Adam Furr 1	*	1200
F-H-E Oil Co. et al, Finch 8-C	170	668
Maer-Martin et al, Eichelberger 1	*	901
Mollenkoph et al, Larimore (Sec. 2244) 1	*	740
Nix & Dale, Daniel 3	35	895
C. A. Norment et al, Parrish 1	*	1205
E. R. Riggs et al, Larimore 17	260	708
R. J. Watson et al, Morris 1	*	710
SOUTH YOUNG COUNTY—		
Brazos River Gas Co., Cox 1	*	470
Grubbs et al, Weaver 2	*	422

CENTRAL WEST TEXAS

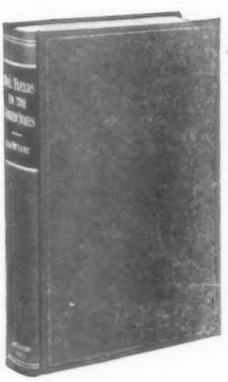
BROWN COUNTY—		
Bush & Roberts, Richardson 2	*	650
Hynes & Engle, Leach 2	¶1½	1141
Nystel et al, Guyer 2	*	1103
Warren et al, Newton 1	25	1249
COLEMAN COUNTY—		
Arcadia Ref. Co. et al, Golson 2	150	1602
Golson 3	160	1584
Capital City O&G Corp., Hubbard 1	*	3622
Jackson et al, Henderson 1	*	570
Kelly et al, Long 1	*	1790
McGahey et al, Overall 1	*	912
EASTLAND COUNTY—		
Wilkins & Edwards, Harrell 1	¶¼	1447
ERATH COUNTY—		
Peters et al, Smith 1	*	3375
PALO PINTO COUNTY—		
Wickens et al, Heath 1	*	3338
SHACKELFORD COUNTY—		
Goodrum et al, Ackers 1	*	1853

CENTRAL EAST TEXAS

RUSK COUNTY—		
C. P. Oil Co. (Roy I. Carter), Mayfield Alford 1	1800	3640
Cordova Union Oil Corp. et al, C. O. Christian 1	5000	3684
Humble O&R Co., L. D. Crim 3	12,000	3720
E. M. Jones-Houston Oil Co., Peterson 1-A	*	2750
Karona Oil Co., J. N. Peterson 1	10,000	3616
Magnolia Pet. Co., Della Crim 1	15,000	3712
Olsan Bros. et al, J. T. Brown 1	5000	3713
Petroleum Marketing Corp., Camp 1	2000	3658
Pilot Oil Co., A. P. Finney 1	5000	3660
Sinclair O&G Co., W. W. Holland 2	2000	3695
W. W. Holland 3	1500	3695
Tidal Oil Co., Toliver 1	2500	3688
VAN ZANDT COUNTY—		
Pure Oil Co., Frank Blackstock 1	*	2990
R. E. Cade (50-ac) 2	1000	2957
F. B. Smith (80-ac) 4	4000	2928

NEW MEXICO

EDDY COUNTY—		
Flynn-Welch & Yates, State 59, (Sec. 5-19-28)	*	2049



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HOUSTON TEXAS

Permits Granted For New Wells

▼ ▼ ▼

CALIFORNIA

BARDSDALE — Ross and Associates, No. 10, 12-3-20.

COYOTE HILLS—Standard Oil Co., Murphy-Coyote 106, 18-3-10.

HUNTINGTON BEACH—Archie L. Fietz, No. 1, 10-6-11.

KERN COUNTY—John B. Harding, No. 2, 5-10-10.

LOST HILLS—General Pet. Corp., Lost Hills, Twe-1301 13-26-20.

PIRU—Bardeen Pet. Co., No. 1, 13-4-19.

PLAYA DEL REY—The Ohio Oil Co., Gun Club 10, 21-2-15. Union Oil Co., Townsite 8, 28-2-15; Townsite 9, 28-2-15.

ROSECRANS — Golden State Exploration Co., No. 1, 7-3-13.

ROUND MOUNTAIN—Shell Oil Co., Olcese 3-1, 27-28-29.

SANTA PAULA—Belga-American Oil Co.'s No. 1, 22-4-21.

TULARE COUNTY—George C. Knoop, No. 1, 20-22-27.

VENTURA AVENUE—Associated Oil Co., McGonigle 9, 23-3-23.

VENTURA COUNTY—Magu Synd., No. 1, 17-1-21.

LOUISIANA

BOSSIER PARISH — Harry I. Morgan, Shreveport, La., Kendriks B-13, 22-19n-11w, 2840 ft w and 1320 ft n of se cor of section.

CALCASIEU PARISH—Wilson Broach Co., Beaumont, Texas, Strip 8, 33-10s-12w, 50 ft n and 379 ft e sw cor se¼ of ne¼ of sec. Freeport Sulphur Co., Freeport, Texas, Vinton Dome, Matilda Gray 2, 33-10s-12w, 520 ft n and 150 ft e sw cor of sec.

CONCORDIA PARISH—Britton & Kuntz, Natchez, Miss., Grassmere 1, 23-8n-10e, 59° and 15 ft e 4822 ft from n.e cor of sec.

OKLAHOMA

CARTER COUNTY—Don Phillips' Lyles 1, se c sw ne 28-2s-2w.

CREEK COUNTY—Holmes Oil Co.'s Morrison 1, se c sw 32-19-10e; A. A. Bailey et al's Weaver 4, nw c sw nw 18-19-9e; Wilson Pet. Co.'s Cat 1, (owd) se c sw 31-16-9e.

JEFFERSON COUNTY—D. C. Chenault's Grover 1, ne sw sw 24-7s-6w.

LINCOLN COUNTY—Coline Oil Co.'s Tillford 2, sw nw se 7-14-4e,; Magnolia Pet. Co.'s Tillford 2, nw sw se 7-14-4e.

MUSKOGEE COUNTY — OK Pet. Co.'s Grayson 1, c nwl nw nw 29-16-15e.

OKFUSKEE COUNTY — M. H. Watts' Chaplin 1, sw c 4-11-10e.

OKLAHOMA COUNTY—Slick Estate's Friscoe 3, se c ne nw se 3-11-3w.

PAYNE COUNTY—Deep Rock Oil Corp.'s Littlechief 1, (owd) nw c ne 4-18-5e; Hilton and Phillips' Workman 1, ne nw se 24-18-4e.

PITTSBURG COUNTY—Mid-Western Oil Co.'s Mattocks 1, c nw se 8-7-18e.

SEMINOLE COUNTY — Mid-Kansas O&G and Ramsey Pet. Corp.'s Davis 5, nw se nw 30-8-8e. Oils Inc.'s Fisher 1, nw c sw 12-7-7e.

TULSA COUNTY—Ohio Pet Co.'s Haikey 3, se c sw sw 33-18-14e; Murray et al's McIntosh 3, nw c sw se 17-19-14e; Murphy et al's McIntosh 1, nw c 28-19-14e.

WAGONER COUNTY—J. A. Barber et al's Childers 2, cwl nw sw 28-18-17e.

KANSAS

COWLEY COUNTY—Long et al's Carlisle 1, sw se se 35-34-3e.

FORD COUNTY—Carter Oil Co. et al's Everett 1, c ne 22-29-21w.

McPHERSON COUNTY—The Texas Co.'s Flook 1, sw c 29-19-1w; Lario O&G and Shell's Becker 1, sw se ne 36-19-2w; Dickey Oil Co. and Shell's Decker 1, se c 35-19-2w; McPherson O&G Dev. Co. and Shell's Decker 1 "B", c ne 11-19-2w; Moriarty et al's Sadie 2, c se sw 2-19-2w; Moriarty et al's Anderson 1, c nw sw 2-19-2w.

RUSSELL COUNTY—Sterns & Streeter et al's Miller 1, sw se se 30-14-13w.

For Tabulation and Comparison See Market Section

TEXAS

ARCHER COUNTY—Cable Oil Co., Wichita Falls, J. L. Webb, 80, 2, B 4, I&GN sur, 300 ft e of 1. Hunter Oil Corp., Wichita Falls, Duckorth, C, 161, C1, B 5, J. W. Harris sur, 1650 ft from n and 97 ft from e line. R. J. Brown, Henrietta, S. J. Webb, 40, 1, S 239, B 6, I&GN sur, 150 ft from s and w lines.

AUSTIN COUNTY — Humble O&R Co., Houston, E. Grawunder, A, 3, W. C. White sur, 390 ft from nw and 1100 ft from ne line.

BEE COUNTY—United Prod. Co., Houston, G. A. Ray, 100, 31, G. A. Kerr sur, 330 ft from s and w lines; 33, 330 ft from n and e lines; 34, T. Hanson sur, 1207 ft from s and 2609 ft from w line sur.

BELL COUNTY—Wilden Oil Co., Temple, J. F. Edd, 50, 1, M. Moren sur, 160 ft from e and 750 ft from s line.

BEXAR COUNTY—Gatl'n Oil Co., San Antonio, J. A. Beck, 279, 6, Montez sur, 150 ft from ne and 956 ft from se line.

CALDWELL COUNTY—M. O. Rayor, Luling, N. Dunlap, 35, 1, S. Seale sur, 150 ft from n and w lines. Jno. F. Camp, San Antonio, J. B. Moore, 84, 1, Wm. Clinton sur, 450 ft e and 200 ft from s line.

CALLAHAN COUNTY—Den Wich Oil Co., Abilene, W. A. Ramsey, 80, 16, 2282 TE&L sur, 1400 ft from w and 1083 ft from s li sec.

CASS COUNTY—Jas. E. Smitherman, Shreveport, A. S. Fell, 103, 1, Jno. Ferrell sur, 750 ft w of center of e line.

COMANCHE COUNTY—J. H. Haynes et al, De Leon, S. G. Haynes, 160, 1, S 1229, A. Sowell sur, 150 ft from n and w lines.

CRANE COUNTY — Continental Oil Co., Wichita Falls, Cowden, B, 160, 2, S 81, B X, CCSD&RGNG sur, 330 ft from n and 2479 ft from e li sec.

DUVAL COUNTY—Magnolia Pet. Co., Dallas, J. O. Wilson, 1920, 2, S 134, GB&CNG sur, 330 ft from n and 1320 ft from w line.

FALLS COUNTY—C. R. Smith, Box, E. W. Bateman, Fort Worth, J. Czaykowski, 125, 1, R. Moffett sur, 770 ft from n and 450 ft from e line.

GREGG COUNTY—Merren, Glasswell & Woolf, Shreveport, S. G. Smith, 22, 1, I. C. Skillern sur, 200 ft from n and w lines. J. Z. Werby, Longview, S. King, 5, 1, W. P. Chisum sur, 251 ft from n and 219 ft from w line; 2, 280 ft from n and 170 ft from e line. Tom C. Patten, Tyler, Dudley, 50, 1, M. Van Winkle sur, 150 ft from s and w lines. J. A. Knowles, 7, 1, M. Van Winkle sur, 150 ft from s and w lines. Shell Pet. Corp., Dallas, J. D. Davis, 80, 1, Wm. Robinson sur, 300 ft from s and e lines. A. G. Oliphant, Tulsa, B. Peterson, 80, 1, J. D. Carothers sur, 155 ft from s and w lines. Arkansas Fuel Oil Co., Shreveport, J. K. Lathrop, 61, B 1, Wm. Robinson sur, 225 ft from w and 162 ft from s line.

GRAY COUNTY—H. H. Sanders, Amarillo, J. E. Wright, 160, 1, S 12, B 3, I&GN sur, 1141 ft from e and 330 ft from s line sec.

GUADALUPE COUNTY — Humble O&R Co., Houston, L. G. Denman, A, 300, 23, A. S. Emmett sur, 3488 ft from se cor and 850 ft from ne line. Simms Oil Co., Dallas, J. Manford, 88, 5, J. Hodges sur, 1260 ft from ne and 500 ft from se line. Magnolia Pet. Co., Dallas, R. Miller, 92, 8, J. B. Alexander sur, 450 ft from n and 200 ft from w line.

HARRIS COUNTY — Sun Oil Co., Beaumont, E. L. Bender, 21, W. B. Adams sur, 300 ft nw of 15.

HARRISON COUNTY — W. M. Hobson, Marshall, P. P. Taylor, 104, 1, H. Vardaman sur, 414 ft from s and 328 ft from e line. Crump & Hanagan, Marshall, S. H. Dunn, 100, 1, B. Humphries sur, 809 ft from w and 1320 ft from s line.

HASKELL COUNTY — Bridwell Oil Co., Wichita Falls, M. L. G. Stone, 200, 1, S 14, J. F. White sur, 600 ft from s and 1000 ft from e line survey.

HUTCHINSON COUNTY — Phillips Pet. Corp., Bartlesville, W. B. Hamilton, 240, 1, S 22, B 47, H&TC sur, 993 ft from e and 1652 ft from s line.

JEFFERSON COUNTY—Jas. B. Hammond, Beaumont, McFaddin, 1, P. Lemaine sur, se corner Reviss Island.

JONES COUNTY — Lancaster, Hathaway, Wallace & O'Brien, Merkel, J. A. Butler, 80, 1, Wm. Littlefield sur, 330 ft from e and 1238 ft from s line.

LEE COUNTY—C. B. Polk, et al, Houston, O. E. Stolz, 25, 1, H. Donahue.

McLENNAN COUNTY — C. E. Groover, Waco, T. F. Bryan, 477, 1, S 2, T. Vega sur, 150 ft from e and 700 ft from n line.

McMULLIN COUNTY—Camp & Stanolind O&G Co., San Antonio, J. O. Massey, 640, 1, S, 472, F. Rooney sur, 150 ft from s and e lines of section.

MARION COUNTY—Hindman, Rondeau et al, Longview, H. P. McGaughey, 1500, 1, W. J. Wills sur, center.

MENARD COUNTY—Voss & Bryan, Mason, F. Brandenburger, 640, 1, 455, E. Henkel sur, 714 vs. from se and 237 vs. from n line. J. C. Barnett, Menard, Callan Co., 128, 5, S 1, B 33, BS&F sur, 150 ft from w and 1050 ft from s line sec.

NAVARRO COUNTY—Jeff Moore, Dallas, W. N. Mathews, 131, 2, A. J. P. Smith sur, 2324 ft from n and 846 ft from w line.

PALO PINTO COUNTY—Lone Star Gas Co., Dallas, Brooks-Allen, 600, 1, B 3, T&P sur, 1250 ft from s and e lines.

PANOLA COUNTY—Texas Co., Houston, G. W. Brumble, 100, 12, J. Womack sur, 400 ft from n and 200 ft from w line sur.

PARKER COUNTY—F. J. Considine, Mineral Wells, J. C. S. Howard, 40, 1, S 344, TP Ry sur, center.

PECOS COUNTY—Corvette Oil Corp., Fort Worth, Monroe, 80, 1, S 39, B 194, GC&SF sur, 150 ft from n and e lines.

RUSK COUNTY—Humble O&R Co., Houston, J. N. Peterson, 45, 5, I. Ruddle sur, 250 ft from e and 252 ft from s line. L. D. Crim, 628, 9, Seiver sur, 150 ft from s and 2138 ft from e line; 8, 150 ft from s and 4468 ft from e line;6, 150 ft from s and 4768 ft from e line; 7, 150 ft from s and 5172 ft from e line. J. N. Peterson, 63, 4, I. Ruddle sur, 200 ft from n and 271 ft from e line; 12, 3, 740 ft from s and 120 ft from w line. C. P. Oil Co., Henderson, Mayfield-Alford, 20, 2, J. Ximinez sur, 150 ft from s and w lines. Haynes Drilling Co., Shreveport, J. T. Brown, 40, 4, M. J. Pru sur, 150 ft from n and w lines. Pilot Oil Co., Dallas, A. P. Finney, 40, 1, J. Ximinez sur, 150 ft from s and e lines. Turman Oil Co., Tulsa, A. J. Desson, 50, 1, M. J. Pru sur, 200 ft from w and 822 ft from n line. Federated Oil Co., Wichita Falls, W. M. Camp, 15, 1, J. Ximinez sur, 200 ft from s and w lines. Mayfield-Alford, 16, 2, J. Ximinez sur, 200 ft from s and e lines. W. M. Camp, 15, 2, J. Ximinez sur, 200 ft from s and e lines. Sinclair O&G Co., Fort Worth, W. W. Holland, 55, 7, J. Ximinez sur, 150 ft from s and 490 ft from w line. R. A. Irwin et al, Marshall, J. N. Peterson, 16, 1, I. Ruddle sur, 150 ft from s and e lines. Westexas O&R Co., Ft. Worth, J. C. Talley, 11, 1, J. Ximinez sur, 101 ft from e and 310 ft from s line. Geo. B. Ray, Wichita Falls, J. A. Birdwell, 75, 1, M. J. Pru sur, 1100 ft from n and 155 ft from e line. E. R. Tennant, Dallas, H. Brooks, 176, 1, M. J. Pru sur, se corner. L. W. Callender, Henderson, E. B. Alford, 3, 1, G. Parker sur, 150 ft from n and w lines. Turman Oil Co., Tulsa, A. J. Deason, 50, 2, M. J. Pru sur, 150 ft from n and w lines. Moody-Seagraves, San Antonio, A. Thrash, 13, 1, M. J. Pru sur, 161 ft from e

(Continued on page 134)

Wildcat Reports From All Sections

OKLAHOMA

KAY COUNTY—T 27n, R 2e, Sec. 9, Mummer et al's Sornick 1, nw c se, hfw 2070-2170 ft, ur 8-in 2330 ft. T 26n, R 1w, Sec. 32, Boucher et al's Jefferson 1, ne c sw, sd 950 ft.

GRANT COUNTY—T 25n, R 4w, Sec. 22, Cowden's Cellmer 1, ne c se ne sw, lost tools 5640 ft, sd.

ALFALFA COUNTY—T 24n, R 11w, Sec. 14, J. V. Bailey's Acre 1, c sw ne, sd 4970 ft.

GARFIELD COUNTY—T 24n, R 6w, Sec. 9, Pulse Beamer et al's White 1, se c nw, sd 5833 ft, crooked hole.

NOBLE COUNTY—T 21n, R 1e, Sec. 12, Barnsdall et al's Miksch 1, nw c sw, sd 4849 ft.

BLAINE COUNTY—T 19n, R 10w, Sec. 13, Washoma Pet. Co.'s Phillips 1, c nw sw, hfw 4535-37 ft, sd.

LOGAN COUNTY—T 18n, R 3w, Sec. 33, Healey et al's Quier 1, se c sw, sd 3970 ft.

KAY COUNTY—T 28n, R 3e, Sec. 24, Summitt Drlg. Co. et al's Hays 1, nw ne nw, sd 1950 ft.

OSAGE COUNTY—T 28n, R 7e, Sec. 4, L. G. Stanly et al 1, se c sw, sd 1910 ft.

PAWNEE COUNTY—T 25n, R 5e, Sec. 15, Cochran et al's McFadden 1, ne c sw, rig. T 22n, R 5e, Sec. 2, Sherry et al's Milsap 1, se c sw, sd 1750 ft. T 20n, R 5e, Sec. 6, W. A. Rookstool's Berry 1, nw ne sw, show gas 1951 ft.

LINCOLN COUNTY—T 13n, R 6e, Sec. 8, Atlantic's Beebe 1, sw ne sw, lcn.

OKFUSKEE COUNTY—T 12n, R 10e, Sec. 3, Shepperd et al's Shepperd 1, se nw sw, fsg csg 3690 ft.

PITTSBURG COUNTY—T 9n, R 10e, Sec. 32, Pattison et al's McDuff 1, sw nw se, sd 5682 ft. T 8n, R 14e, Sec. 14, C. O. Cannady et al's Smith 1, sw c ne nw nw, rig and tools. T 7n, R 14e, Sec. 5, C. O. Cannady et al's Travis 1, c sw ne, rig. T 6n, R 15e, Sec. 7, Perrine et al's Ringland 1, nw c ne, spudded and sd.

LATIMER COUNTY—T 6n, R 18e, Sec. 4, Choctaw Gas Co.'s Weaver 1, c ne nw, spudding. T 6n, R 19e, Sec. 16, P. English et al's Weaver 1, c nw se, sd 300 ft.

ATOKA COUNTY—T 1n, R 15e, Sec. 9, Edgerton et al's Rolland 1, c nw, sd 700 ft.

OKLAHOMA COUNTY—T 12n, R 4w, Sec. 17, C. F. Cuniff's Trustee, St. Joseph Orphanage 1, sw c ne sw se, sd 6700 ft.

SEMINOLE COUNTY— T 10n, R 6e, Sec. 19, Bunte et al's Bruner 1, se c nw, rig.

HUGHES COUNTY—T 7n, R 9e, Sec. 17, Gilcrease Oil Co.'s Buckner 1, ne nw se, coring at 3410 ft.

ROGER MILLS COUNTY—T 13n, R 21w, Sec. 10, Richfield O&R's Hiatt 1, se c, rig. T 12n, R 24w, Sec. 23, Ute Oil Co. et al's Williams 1, c sw, dr 3475 ft. T 11n, R 26w, Sec. 4, J. J. Rook et al's Davis 1, c nw ne (owd) sd 2840 ft.

CADDO COUNTY—T 9n, R 13w, Sec. 18, J. J. Wright et al's Boys 1, nw c, lcn.

WASHITA COUNTY—T 8n, R 19w, Sec. 29, Snodgrass et al's Blockner 1, nw c, sd 1440 ft. T 8n, R 18w, Sec. 21, Burns & Prince's Maydock 1, sw c, sd 150 ft.

GREER COUNTY—T 7n, R 22w, Sec. 1, Roy Good et al's Cliffell 1, nw c, sd 1615 ft. T 7n, R 21w, Sec. 23, H. A. French et al's Murphy 1, sw nw se, sd 1490 ft.

HARMON COUNTY—T 4n, R 24w, Sec. 17, Harmon-Tex Oil Co.'s Headley 1, ne c, sd 2592 ft.

COMANCHE COUNTY—T 3n, R 9w, Sec. 3, Okla. Nat.'s Doeble 1, ne c, sw sw sw, sd 1450 ft.

STEPHENS COUNTY—T 1n, R 8w, Sec. 25, Rose Southard's McKinley 1, ne c, sd 1063 ft. T 1n, R 7w, Sec. 1, Junior Oil Co.'s Thompson 1, ne sw se, sd 3329 ft. T 3s, R 8w, Sec. 3, A. L. Andres' Patrick 1, c s½ se, dr 2525 ft.

HUGHES COUNTY—T 5n, R 11e, Sec. 15, J. J. Wright's Roberts 1, se c sw, sd 1645 ft.

GARVIN COUNTY—T 2n, R 2w, Sec. 24, Malernee Oil Co.'s Phillips 1, ne c sw, lcn.

COAL COUNTY—T 2n, R 8e, Sec. 10, Whitney et al's Miller 1, se c ne (owd) sd 760 ft. T 1n, R 8e, Sec. 35, W. E. McCraw O&G's Stiring 1, ne c se, sd 250 ft.

CARTER COUNTY—T 4s, R 2e, Sec. 32, Texas-Okla. Drlg. Co.'s Anderson 1, se c ne se, sd 2806 ft.

ABBREVIATIONS

NOTE—The following is the explanation of abbreviations, signs, etc., used in completion and wildcat reports: *—dry hole, abandoned well; ‡—salt water; †—junked and abandoned; ¶—million feet of gas; abn—abandoned; bbls—barrels; b.s.—basic sediment; cas—casing; co—cleaning out; dk—derrick; dr—drilling; fsh—fishing; ft—feet; in.—inches; lcn—location; m—milling; n, s, e, w—north, south, east, west; r—reaming; sd—shut down; sdtr—sidetracking; sp—spudding; sr — straight raming; std—standardizing; sw — salt water; td—total depth; ur—underreaming; wo—workover; wosr—waiting on standard rig.

WEST TEXAS

Completions

JONES COUNTY—
Shaheen Oil Co. & Union Oil Co., King 1 . . . . . * 2187

PECOS COUNTY—
Humble O&R Co., H. L. Kokernot 1 . . . . . * 6170
Williams & Moran, Heiner-State 1 * 1890

ANDREWS COUNTY—Deep Rock Oil Co. et al's Kuykendall 1, elev 3217 ft, top anhydrite 1678 ft, salt 1720-2810 ft, top lime 4045 ft, sd with small show oil and water 4648 ft.

COCHRAN COUNTY — Continental Oil Co.'s Slaughter 1-B, elev 3809 ft, top brown lime 4070 ft, dr lime 4415 ft. Penn Oil Co. & Kiskadden's Slaughter 1, lcn.

CONCHO COUNTY—W. C. Beesley et al's Sam Waring 1, sd 267 ft. A. W. Turner-Cromwell & Wesner's Brosig 1, elev 1699 ft, ur 1850 ft. W. L. Betts & Dennis' Hendrick 1, dk.

CRANE COUNTY—Continental Oil Co. & Frank Zoch's Cowden 2-B, top salt 680 ft, dr 1010 ft. Cranfill Bros. Oil Co. et al's Muir 1, elev 2499 ft, top white lime 2330 ft, dr 4355 ft. Cranfill & Gulf Prod. Co.'s J. B. Tubb 1, elev 2526 ft, salt 505-1400 ft, top brown lime 1410 ft, top white lime 2455 ft, flowing 50 bbls oil and 25 bbls water, dr 5100 ft.

ECTOR COUNTY—Galt-Brown Co. & Penn Oil Co.'s Cowden 1, sd 180 ft. Southern Crude Oil Pur. Co.'s Cowden 2, elev 3965 ft, top anhydrite 1782 ft, salt 1872-2805 ft, dr 3865 ft. H. F. Wurtz et al's Ibbetson 1, elev 2840 ft, salt top 865 ft, sd 3280 ft.

EDWARDS COUNTY—Phillips Pet. Co.'s Holman 2, elev 2274 ft, dr 7805 ft.

FISHER COUNTY—Roeser-Pendleton, Inc., et al's Gribble 1, elev 1864 ft, dr 2580 ft. Texas Unity Oil Co.'s First Natl Bank 1, rig.

GARZA COUNTY—Penny & Porsey's Justice 1, sp.

GAINES COUNTY—Texas Consolidated Oil Co & TP Coal & Oil Co.'s E. H. Jones 1, elev 3636 ft, dr 1980 ft.

TOM GREEN COUNTY—Phillips Pet. Co. et al's Gulden 1, elev 2016 ft, co 5050 ft.

HOWARD COUNTY—Continental & Group One Oil Corp.'s E. E. Brinkley 1, dr 475 ft. Greene Prod. Co.'s Denman 1, dr 150 ft.

HUDSPETH COUNTY—R. G. Patillo & Ed. Welch's K. S. Briggs 1, dr 165 ft.

IRION COUNTY—Brazelton Bros. & C. C. Williams (was Webb et al's) Williams 1, dr 415 ft. Chas. Denny & W. R. Andrews' Tankersley 1, elev 2207 ft, sd 1374 ft. Stanolind O&G Co.'s W. H. Williams 1, elev 2544 ft, ur 1780 ft. Straughn et al's Tankersley 1, elev 2306 ft, pb from 1506 to 1220 ft.

LOVING COUNTY—The California Co.'s J. G. Allen 3 and 4, rigs; Allen 2, elev 2742 ft, top salt 830 ft, dr 3070 ft. Erwin & Mohres' McGinley Corp. fee 1, rig. Folbre & Evans' D. P. Dean 1, sd 1068 ft. Grisham-Hunter Corp.'s Dean 1, sd 1015 ft. Henshaw et al's Reagan 2, rig. Pete Hoffman et al's Ramsey 1, sd 550 ft; Ramsey 2, rig. Lewis & Slagel Drlg. Co.'s Cartwright-Henderson 1, elev 2901 ft, salt 585-2907 ft, sd 2915 ft. C. H. Lockhart et al's Hubbard 1, top salt 715 ft, cem cas 4027 ft. Rush-Anderson & Moor's Wheat 1, lcn. F. S. Tennant et al's Roy Martin 1, rig. West Texas Pet. Corp. (Eppenauer's) J. G. Allen 2, top salt 810 ft, dr 3165 ft; Salisbury 1, top salt 890 ft, dr 2010 ft.

MENARD COUNTY—L. G. Priest et al's Sorrell 1, elev 2279 ft, fsh 2695 ft. Voss & Bryan's Brandenberger 1, sp.

PECOS COUNTY—Charlesworth-Messenger Oil Co.'s Butz 1, elev 2519 ft, sd 1290 ft. Disney & Gholson's C. O. Wilson 1, lcn. C. L. Dittman Oil Co.'s Eaton 2, lcn; Jackson 1, dr 1425 ft. Magnolia Pet. Co.'s Eaton 1, elev 2426 ft, top salt 966 ft, dr 1435 ft. J. R. Miller et al's Bennett 1, sd 2285 ft. McCarty Oil Co.'s Gray 3, sd 1437 ft. Penn Oil Co. et al's J. B. Alvis 1, elev 3493 ft, top Rustler lime 1385 ft, dr 2325 ft. O. J. Perren et al's Eaton 2, elev 2437 ft, dr by tools 1765 ft. Pure Oil Co.s' Harrison 1, elev 3495 ft, top Delaware 4265 ft, sd 5000 ft. Riser & White's Riser 1, sd 500 ft. Tex-Mex Pet. Corp.'s Eaton-Pure 1, elev 2426 ft, top salt 940 ft, sd 1005 ft.

REEVES COUNTY—The California Co.'s Kloh 2, dr 1385 ft.

SCHLEICHER COUNTY — Eastland Oil Co. Unit Plan's Tisdale 1, elev 2295 ft, set cas 1680 ft. Paul Teas & Walter Gant's Allison 1, elev 2311 ft, sd in sandy-lime 5006 ft. J. D. Wesner et al's Ratcliff 1, elev 2408 ft, fsh 1060 ft.

SCURRY COUNTY — R. B. Pender O&G Co.'s Davis 1, top salt 445 ft, co 5000 ft. Scurry County Oil Exchange's Earnest 1, lcn. Seifert & Dibble's Blackburn 1, top salt 720 ft, set 6-inch cas 2320 ft.

TAYLOR COUNTY — Adams-Ferguson & Hobbs' Lowe 3, elev 1918 ft, re-set cas 1970 ft. J. B. Jameson et al's Webb 1, elev 1905 ft, dr 6295 ft. Sander et al's Abilene Water Works 1, elev 1759 ft, sd 2785 ft.

TERRELL COUNTY — Mid-Kansas O&G Co.'s M. H. Goode 1, elev 2405 ft, making dry gas, dr sandy-lime 5655 ft.

VAL VERDE COUNTY—O. O. Owens et al's Mills 1, elev 2130 ft, sd 6780 ft.

UPTON COUNTY—Bennett Oil Co. & P. H. Williams' Shirk 1-A, dr 1980 ft. C. C. Duffey et al's McClintic 4, rig. G. E. Farley et al's Lane 1, elev 2800 ft, top salt 775 ft, sd after swab 85 bbls oil in 2 hrs at 2345-91 ft. Gulf Prod. Co.'s McElroy 91, dr 2675 ft; McElroy 92, dr 920 ft.

WARD COUNTY—Alpine Oil & Dev. Co.'s Boogher 3, sd 275 ft. Beckley et al's Johnson 1, rig. Bell & Weir et al's Boogher 1, rig. Buster Black et al's Hall-Roberts 1, lcn. Alex Bradford et al's B. Carson 1, fsh 350 ft. Clyde Bradford et al's Hordage-Wilson 1, lcn. California Co. & Atlantic's Gordon 1, dr 1505 ft. Gibson Bros. et al's Johnson 1, rig. Gulf Prod. Co.'s Hutchings 7, elev 2648 ft, top anhydrite 910 ft, dr 1915 ft; O'Brien 16, elev 2640 ft, top salt 1195 ft, top lime 2330 ft, flowing oil by heads in sandy-lime 2577-87 ft. J. G. Kugle et al's Chas. Willis 1, swab and flow 80 bbls daily after deepening to 2495 ft. Magnolia Pet. Co.'s Atlantic-Sealy 1, elev 2686 ft, dr 1625 ft. R. F. Owen et al's Johnson 1, elev 2499 ft, top salt 1600 ft, dr 2760 ft. Peck et al's Geo. Merritt 1, rig. Prairie O&G Co.'s Hill 1, elev 2523 ft, top salt 975 ft, co and est 50 bbls oil 2285-2405 ft. Rickford & Fugler's Boogher 1, dr 130 ft. Paul Ryan et al's Allen 1, elev 2931 ft, top salt 800 ft, co with 1500 ft oil in hole 2180-2244 ft. Shipley Oil Corp.'s Hayzlett 5, top salt 725 ft, co with 1000 ft oil in hole after shot 150 qts at 2457-2507 ft; Monroe 1-A, elev 2655 ft, top salt 2485 ft, fsh 3780 ft. Chester Smith et al's J. F. Boogher 1, dr 510 ft.

WINKLER COUNTY—Magnolia Pet. Co.'s Basharn 1, elev 2884 ft, top anhydrite 829 ft, top salt 996 ft, top lime 2317 ft, comp pumping 9 bbls 30.7 gravity oil at 3075-3109 ft; J. B. Walton 1, elev 2931 ft, top salt 1165 ft, top lime 2640 ft, show gas, dr 2825 ft.

CENTRAL EAST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
CHEROKEE COUNTY—		
Roy G. Baker et al, M. M. Tomme 1	*	4003
NAVARRO COUNTY—		
L. G. Priest et al, H. Albritton 1	*	3227

BOWIE COUNTY — Maud Redwater Oil Co.'s Merritt 1, Y. S. McKinney sur, sd 635 ft. Lee Timberlake et al's Tidwell 2, L. M. Rice sur, elev 290 ft, sd 720 ft.

CASS COUNTY—C. E. Murdock et al's G. W. Coody-First Nat'l Bank 1, Evans Watson sur, rig. Olds-Smith et al's Joe Athenay 1, J .C. Byers sur, sd 1600 ft. John C. Rogers et al's W. Q. Henderson 1, Wm. Davis sur, sd 810 ft; Lanier 1, K. A. Welborn sur, elev 366 ft, cas froze 1920 ft. Smith et al's Wilson 1, Jas. Graham sur, dk. J. E. Smitherman et al's A. S. Fell 1, Farrell sur, elev 295 ft, top Pecan chalk 2405 or 2415 ft, sd 3002 ft.

CHEROKEE COUNTY—Baker et al's Tomme 1, Pecan chalk 3054-3418 ft, top Austin chalk 3968 ft, elev 442 ft. D&A in chalk 4003 ft. D. H. Byrd et al's Farriss 1, elev 215 ft, dr 2735 ft. W. G. Gray et al's H. Kyle 1, Jas. McClain sur, lcn. McDonald Bros. et al's W. A. Newton 1, Thos. Quevedo sur, rig. Wm. A. Stone et al's Blount Decker 1, Ruddle-Selman sur, rig.

DELTA COUNTY—Delta Dev. Co.'s Hays-Netherly 2, sd 1920 ft. Everttts Drlg. Co. et al's M. Sansing 1, J. B. Craig sur, sd 2975 ft. D. S. Hoad et al's J. J. Baker 1, R. Carson sur, elev 437 ft, sd 1550 ft. Worthington & Stedham's W. H. Dejernett 1, E. Chick sur, elev 492 ft, sd 1925 ft.

FRANKLIN COUNTY—Harper-Byers Oil Co.'s A. J. Laws 1, D. G. Rogers sur, sd 2450 ft.

HENDERSON COUNTY—H. B. Ashburn et al's T. E. Terry 1, sd 3993 ft. E. L. Chapman et al's Cade Bros. 3, J. B. Dorsey sur, Pecan chalk 3073-3267 ft, Austin chalk 4385-4739 ft, cored dry sand 5051-56 ft.

LAMAR COUNTY—K. O. Bundy et al's G. S. Legate 1, J. V. Cheney sur, rig. Evertts & Allen's J. A. Guest 1, Luke Roberts sur, sd 1670 ft.

LEON COUNTY—Sun Oil Co.'s Ella Grayson 1, Marquette Blk., dr hard shaley sand 2046 ft.

LIMESTONE COUNTY—R. H. Dearing & Sons et al's B. B. Baron 1, E. Mabry sur, Pecan chalk 1622-1817 ft, dr 2200 ft. Geo. B. McCamey et al's Kosse Townsite 1-A, dr 1665 ft. E. E. O'Byrne et al's S. W. Hancock 1, H. York sur, sd 1165 ft.

RAINS COUNTY—Rains County Oil Corp. (Roy Westbrook's) Wm. Cates 1, Calvin Cage sur, rig.

RED RIVER COUNTY—E. L. Chapman et al's Morris-Guest 1, S. Larkin sur, elev 485 ft, fsh 1505 ft. Droppleman & Bundy's J. W. Cunningham 1, S. V. Chi sur, sd 2745 ft. Echols & Peters' E. Howison 1, W. Humphries sur, dk. Evertts & Allen's W. F. Bryan 1, P. Vaughn sur, dk. Pierson et al's J. R. Dellahunty 1, sp and sd. Johnson Pet. Co.'s Style 1, Dean sur, sd 2280 ft.

ROCKWALL COUNTY—A. W. Walker & Son et al's M. S. Jones 1, S. Simmons sur, dr 700 ft; Paul Snow 1, J. E. Sherwood sur, sd 926 ft.

RUSK COUNTY—Burnham-Anderson-Cameron & Lloyd's Nicely 1, Thos. Obar sur, elev 339 ft, top Pecan chalk 2023 ft, Austin chalk 3045-3195 ft, top Georgetown lime 3201 ft, dr in Georgetown 3340 ft. Capps-Smith & Anderson-Cameron's J. L. Cochran 1, J. Roth sur, elev 386 ft, Pecan chalk 2683-3011 ft, top Austin chalk 3475 or 3490 ft to 3594 ft, top Georgetown 3769 ft, sd for dst. Carolyn Oil Corp.'s E. C. Cary 1, John Pilburn sur, lcn. R. W. Giles (Shreveport Prod. Co.'s) Newt Orr 1, Wm. Tippett sur, dk. J. Griffith et al's F. J. Lowe 1, Wm. Williams sur, dk. Laster Oil Co. & Miller's B. B. Gray 1, Jas. McLean sur, dk. Moss et al's Hamp Matthews 1, elev 387 ft, sd 2710 ft. Pearl Oil Co. (Paul Vitek's) Eaton 1, F. Cordova sur, sp and sd. Rusk County Oil Co.'s Robertson 1-A, Penny sur, jkd 1201 ft, skid rig. Nat Sadler et al's Ed. Sparks 1, Abner Nail sur, dr 570 ft. Daniels & Patten's Mercer-Crews 1, M. A. Young sur, dk. Leonard Pet. Co.'s Adams 1, S. C. George sur, dr 1910 ft.

SMITH COUNTY—Big Indian Oil & Dev. Co.'s C. Mills 1, Jas. Jordan sur, elev 420 ft, rig. Howard Pet. Co.'s Lee Holt 1, Barnes Clark sur, lcn. Guy Lewis et al's Cook-Green 1, Jas. Jordan sur, top Pecan chalk 2737 ft, dr 2810 ft. T. B. Slick Est. & J. G. Kugle, Jr., et al's M. Freeman 1, A. J. Lagrone sur, elev 498 ft, Pecan chalk 2080-3275 ft, sd in Austin chalk 3623 ft.

UPSHUR COUNTY—Dr. F. F. Beeler et al's R. H. McClelland 1, M. P. Torres sur, dk. DeArmand-Capps et al's Turner-Flewellen 1, Marshall Mann sur, dr 1715 ft. J. W. McCullough et al's John Copeland 1, Marshall Mann sur, lcn. McGinley Corp.'s Reeves-Truitt 1, L. B. Brown sur, elev 358 ft, Pecan chalk 2570-2930 ft, dr shale 3450 ft.

VAN ZANDT COUNTY — Bethel Oil Co. (Hervey's) P. Smith 1, M. Neal sur, abn 4815 ft. J. C. Fore & Geo. L. Pace et al's P. S. Hand 1, Wm. Sherman sur, elev 564 ft, Pecan chalk 2420-2444 ft, Austin chalk 3452-3893 ft, fsh drill stem 5160 ft. Kelly O&G Co.'s Lunsford 1, J. Conner sur, sd 2300 ft. Neil McElroy et al's R. W. Murphy 1, H. Bailey sur, sp and sd. Texas Chief Oil & Roy. Corp.'s Foster 2, F. Montgomery sur, materials. Van Oil Assn's J. C. Tankersley 1, L. Landers sur, sd 2000 ft. Wilson et al's Stribling 1, M. B. Fisher sur, sd 2200 ft. Wittmer et al's Beggs 1, Raquet sur, elev 560 or 568 ft, top Pecan chalk 2950 or 2970 ft, abn in chalk 3513 ft.

VAN FIELD—Helms et al's C. E. Bogue 1, Marshall University sur, elev 461 ft, sd 3098 ft. Humble O&R Co.'s R. S. Blake 10, dr 550 ft. Pure Oil Co.'s Frank Blackstock 1, elev 471 ft, top Pecan chalk 1670 ft, top Austin chalk 2630 ft, tested salt water and abn 2930-90 ft; R. E. Cade 3, dk; A. D. Clark (24-ac) 9, testing 2916 ft; B. E. Crim (40-ac) 2, dk; Davis 1, dk; R. A. Enas (64-ac) 1, testing 2940 ft; J. T. Jarman 6, testing 2956 ft; Jarman 7, dk; W. F. Swain (20-ac) 4, dk; O. L. Swain (80-ac) 4, coring 2775 ft; J. T. Thompson (50¾-ac) 10, dk; A. R. Tunnell (101.2-ac) 6, dk; R. L. Wells 5, dk; Wells 12, coring 2762 ft; Ella York (39.6-ac) 3, sd 2455 ft; Ella York (41.1-ac) 4, dr 620 ft; York 5, rig. Shell Pet. Corp.'s E. L. Fowler (32.65-ac) 9, coring 2919 ft. Sun Oil Co.'s T. J. Wallace 2, coring 2660 ft.

SOUTH TEXAS

BEE COUNTY—Alexander et al's McFall 1, 3 miles s Skidmore, ru. Catlett & O'Neill's Miller 1, Ronald Hoskiss sur, 8 miles w Beeville, dk up, dr water well. Mauldin & Fisher's A. J. Kimball 1, Stephin Winship sur, 7 miles sw Pettus in Grayburg area, set 160 ft 10-inch, sd 605 ft. Hicks et al's Billingsley, B. Q. Hadley sur, ne Grayburg area, dr below 2000 ft. J. S. Mauldin's Mauldin 1, just s Pettus townsite, attempting fourth drill stem test 3835 ft. E. S. Price's Weiss 2, 3½ miles se Pettus, still sd 4552 ft. Rowan and Hope's Fannie Gorree 1, T. B. Barton sur, 5 miles w Grayburg pool, dr 3540 ft. United Production Co.'s Ray 31, Geo. A. Kerr sur, midway between townsite and discovery pools, cored sand 3962-69 ft, prep to set csg 3961 ft; Ray 32, 3 miles n Pettus pool in Habbermacher sur, no report, dr at 3918 ft at last report; Ray 34, 900 ft e production in main pool, Thomas Hanson sur, completed 325 bbls with 225 lbs. pressure, sand 3945-50 feet, total depth 3953 ft; Ray 35, 1100 ft e Ray 34, Thomas Hanson sur, mov on..

BEXAR COUNTY—Penn Oil Co.'s Cooksey 1, put back on pump, 6⅝ casing reset 1375 ft, top pay 1410 ft, bottom of hole abt 1475 ft. Russell and Moore's A. O. Mills 3, Navarro sur, dr, no rept on depth. J. Morgan Russell's Price Story 1, A. Navarro sur, dr around 1500 ft at last rept. Weilbacher and Brock's Ernest 1, 2 miles n Somerset, J. Christopher sur, sd 925 ft. Wagner and Stieren's S. A. Irrigated Farms 1, no rept.

BROOKS COUNTY—Ed East's Garcia 3, Las Mastena y Gonzalene grant, sd 1002 ft. Houston Oil Co.'s Wormser-Holbein 3, Palo Blanco de Maguellas grant, reaming 3492 ft, total depth 3500 ft.

CALDWELL COUNTY—V. F. Neuhaus et al's J. B. Moore 1, J. B. Moore sur, 6 miles s Lockhart, mov on.

COMAL COUNTY—Caldwell and Lanier's T. J. Byler 1, HE&WT sur No. s-894, straight reaming to set 10-inch csg, total depth 600 ft.

DUVAL COUNTY—Humble Oil and Ref. Co.'s Kohler 50, sur 164, dr 5116 ft. Southern Oil Co.'s King Harper 3, sur 323, lcn. Vacuum Oil Co. & S. R. & C. Oil Co.'s Duval County Land Co. 3, sur 97, SRC pool, abn 1830 ft; Duval County Land Co. 4, 300 ft w No. 1, sec 293, mov on. O'Byrne et al's Weil Bros. B. S. & F. Sur No. 568, 7 miles sw S&O pool, dr 220 ft. Duval Oil Co. (Frasher & Schoolfield's) Bishop Duval Land Co. 2, sec 135, dr 2285 ft. Magnolia Pet. Co.'s Wilson 2, sec 134, S&O district, ru.

GOLIAD COUNTY—Slick Estate's Allen 1, 1500 ft e and s discovery well, O. Marshall sur, deepened to 4238 ft, being completed, top of pay 4198 ft; Riedel 1, W. C. Brown sur, lcn. Gibson Oil Co.'s Parks 1, 5 miles ne Goliad, mov on new rig to bail, bridged about 500 ft in csg, show 100 pounds pressure some oil at 4320 ft, total depth 5267 ft.

GUADALUPE COUNTY — Luling O&G Co.'s Nixon 1, three miles e Darst Creek field, abnd 3215 ft, chalk topped 2784 ft. San Antonio Oil and Royalty Co.'s Dibrell 1, sec 6, H. & T. C. sur, sw Darst Creek in Dobrowoski area, lcn. Simms Oil Co.'s Manford 5, Manford district, dk. Sun Oil Co.'s Dowdy 1, ½ mile s Darst Creek pool, Jacob Darst sur, dr 2240 ft, topped chalk 2208 ft.

HAYS COUNTY — J. C. Jones' Rufus A. Byler 1, John Ingram sur No. 31, n part of county, dr 650 ft. Harley and Whittington's Heidenreich 1, near Kyle, abnd 2767 ft.

JACKSON COUNTY—Trinity Drillers and Texas Unity Oil Co.'s C. E. Hungerford 1, 2 miles e Edna gas field, H. Smith sur, abn 4500 ft.

JIM HOGG COUNTY—J. D. Pulliam, Jr.'s, Jones 1, Holden sub, Diego Hinjosa grant, share 5-A, sd 2884 ft. J. W. Pippin's N. Hinnant 1, blk 11, sur 147, dk. Peterman and Minahan's Palacios 1, blk 14, sur 231, ru. Mag. Pet. Co.'s Y. J. Cuellar 1, blk 92, W. A. Dannelly sub, sur 575, share 2, El Peyote grant, lcn.

KARNES COUNTY—Karnes County Dev. Co.'s W. J. Hubbard 1, 3 miles w Kenedy, mov on. J. Morrisey's Ragsdale 1, dr 2860 ft in shale.

KERR COUNTY — Evans and Gant's Jeff Love 1, discovery well, preparing to pump after placing on larger pump, total depth 3391 ft. Seiker and Mears, sw cor sec 1605, CCSD &RGNR Ry. sur, 2 miles ne Love test, fsh 300 ft. Mimms et al's J. E. Joung, nw cor sec 28, prep to spud in.

KINNEY COUNTY — Magnolia Petroleum Co.'s Wardlow 1, dr around 5200 ft.

LEE COUNTY—A. H. Wheeler et al's 1, Hiriam Donohue sur, 6 miles w Lexington, core down below csg set at 2000 ft.

LIVE OAK COUNTY—Houston Oil Co.'s Brown Land and Cattle Co. 3, nw corner M. B. Kivlin sur, trying to loosen dr stem at 5273 ft; Brown Land and Cattle Co. 4, sw corner M. B. Kivlin sur, reamed to 4841 ft, prep to core. Jacob, Buzzini and Pickett's Kay 1, Bridget Faddin sur, 5 miles from Geo. West, sd 4017 ft. Phillips Pet. Co.'s W. W. Goebel 1, Refugio School lands, 3 miles ne Oakville, dr 2660 ft. Southern Exploration Co.'s Ponder 1, BS&SF sur No. 1, rigged up, dr water well. Markley Brown 1, to re dr.

MEDINA COUNTY — Yancey Dev. Co.'s Faseler 1, 1¼ miles n Yancy pool, sur 801, dr 225 ft.

NUECES COUNTY—Houston Oil Co.'s Ollie Purl 1-B, blk 7, R. Peters sur, No. 2, Agua Dulce area, reaming 5240 ft; Morgan 3, Saxet area, showed 250 pounds pressure drg gas, on drill stem test 4048 ft. Bess et al's Boory 1, 2½ miles nw Saxet field, dr 3055 ft. Saxet O&G Co.'s Dunn 4, Saxet area, ru; Dunn 7, coring 3445 ft. Moody-Seagraves Producing Co.'s Sedwick 1, 1200 ft n Houston Hunter producer, cored sand 3115 ft. V. F. Neuhaus et al's Bauer 1, (formerly Grim and Yakey), 15 miles w Corpus Christi and just n Robstown, abn 5507 ft. H. H. Weinert's Mohle 1, sec 94, just s of Driscoll townsite, dr 4660 ft.

REAL COUNTY—Eastland Oil Co & Gant and Kilgore's Dan Auld 1, sec 23, CCSD&RG NR Ry sur, 2 miles sw Love producer, dr 780 ft. Evans and Sprinkle's Haby 1, sec 175, AB &M sur, 7 miles sw Love 1, setting 12½-inch csg 1350 ft; Marcus Auld 1, sec 15, blk D, HE&WT Ry sur, dr 3342 ft.

REFUGIO COUNTY — Houston Oil Co.'s Rooke 1-B, 2 miles sw Refugio, ½ mile west production, cored sand 6398 ft, odor of petroleum; Rooke 14, dr 4885 ft. Morgan and Rutherford's Rogers Heirs 1, ¼ mile n Smith-

Rogers well, 3 miles w Refugio, sd 3684 ft. L. L. Smith's Rogers Heirs 2, in old gas area, 3 miles w Refugio, sd 5110 ft.

SAN PATRICIO COUNTY—United Production Co.'s Cage 3, White Point field, mov on.

STARR COUNTY — Kush and Duerkson's Kelsey Bass 1, blk 9, sub of Porcion 75-76-77, Jurisdiction of Camargo, sd 856 ft. Los Olmos Oil Co.'s Kelsey Bass 2, blk 6, sub of Porcion 75-76-77, Jurisdiction of Camargo, dr 881 ft. Sacramento Oil Co.'s Seabury et al 1, sd 349 ft.

TRAVIS COUNTY—Frank Fuchs' Ballerstedt 1, A. Alexander sur, dk.

VICTORIA COUNTY — The Texas Co.'s McFadden 2, nw corner C. M. B. Hoyd sur, completed gasser, ran wild 2025 ft, controlled; McFadden 3, w of No. 2, lcn. United Prod. Co.'s McFadden 1-B, 5700 ft e and slightly n of Lion McFadden 2, set 1303 ft 9⅝-inch csg.

WEBB COUNTY — Cole Pet. Co.'s Benavides 3, blk 7, sur 1613, dr 995 ft. O. W. Killam's Killam 1, sur 1617, dr 1645 ft; Cuellar 4, share 4, Cuellar grant, dr 2385 ft. Geo. S. Marshall's C. W. Webster 3, sur 684, sd 4000 ft.

ZAPATA COUNTY—Allied O&G Co.'s Gutierrez 12, share 4, Fansler Partition, Comitas Grant, sd 100 ft. Benson Oil Co.'s S. Vela 1, blk 12, sur 259, dr water well. Brooklyn Oil Co.'s Cuellar 1, sur 119, dr 1525 ft. Claypool and Nickson's Garza 3, blk 11, sub of Zorro ranch, Comitas Grant, to spud. W. T. (Bill) Henry et al's Gopher Trust Estate 1, blk 10, sur 4, Fullerton sub of Share 8, Borrego Grant, ru. Grim and Yakey's C. Bustamente 2, share 33, dr 1394 ft. K. & P. Oil Co.'s A. Bustamente 4, blk 6, share 5, Fansler Partition, Comitas Grant, testing sand at 1364-70, casing set 1365 ft. O. W. Killam's Cuellar 40, sur 278, dk; Killam 4, blk 11, sur 182, dr 2161 ft. Lowe and Rogers' P. Benavides 1, blk 5, sur 11, dr 1200 ft. A. R. McLennan's Cuellar 2, sur 277, dr 1460 ft. Mid West Public Utilities Co.'s M. P. de Garza 1, blk 33, M. P. de Garza tract, Pedernal Grant, repair boiler, total depth 1580 ft. P. H. Meyers' I. G. Trevino 1, blk 24, sur 412, dr 900 ft. National Oil Co. of Texas' Luther et al 1, blk 97, da Pron sub, ne ½ Porcion 6, sd 210 ft. Nielson and Coursey's Luther et al 1, blk 11, sec 5, Fullerton sub, Share 8, Borrego grant, dr 860 ft. J. I. Newton's I. G. Trevino 3, blk 7, sur 66, lcn. B. F. Nixon's A. Gutierrez 1, blk 8, Partition 10, Borrego grant, sd 37 ft. John J. O'Hern's S. Benavides 2, blk 19, Fansler and O'Hern subdivision of Carto Blanco Ranch, Villa Grant, abn 1702 ft. John Pappas Pool, Inc.'s, Flores 1, 6000 ft from Rio Grande, Porcion 35, dk. Penny Prod. Co.'s Juan V. Cuellar et al 1, blk 1, sur 2, Pappas sub of Porcion 33 and 34, fsh for dr stem, tested dry sand 1958-66 ft. S. T. Phelps, Trustee (Blankenship's) Garza 2, sur 413, dr 1766 ft. Shankle and Murray's F. Cuellar 1, blk 6, sur 61, dr 100 ft. W. R. Shankle's Garza 2, blk 10, sub of Zorro ranch, Comitas Grant, 1274 ft. S. R. & C. Oil Co.'s Montemayor 5-D, blk 8, sur 64, dr 800 ft. F. A. Talmadge and G. Mackenzie's G. F. Trevino 1, blk 6, sur 4, Marts and Beavens sub of Porcion 2 and 3, sd 610 ft. T. H. Ward's G. Uribe 1, blk 8, sub of share 7, Partition 6, Trinidad Uribe Partition of Juan V. Borrego grant, ru and standing.

EAST TEXAS

HARRISON COUNTY — Hunter et al's Daugherty 2, W. B. Burris sur, 12½ cas 245 ft, arr abn, est depth 3560 ft, (last authentic depth, dr hd lime 3528 ft). Karona Pet. Co.'s A. J. Bohler 1, S. F. Sparks sur, elev 310 ft, 12½ cas 214 ft, top Nacatosh 1437 ft, sd 1460 ft. O. H. Parkening's T. J. Taylor 1, Walter H. Payne sur, dk. T. J. Taylor 2, J. C. Hawley sur, dk. Rowan & Nichols' Henry Pitts 1, E. A. Merchant sur, lcn. W. H. Hobson, Tr.'s, Taylor 1, Henry Vardeman sur, elev 284 ft, sp 12½ cas cemtd 355 ft, dr 1500 ft. Crump & Hanagan's Dunn 1, Bettie Humphries sur, elev 330 ft, 12½ cas 270 ft, base Pecan Gap and top Saratoga 2830 ft, dr 2960 ft. Ray Drilling Co.'s Hall 1, D. Davis sur, 10-inch 173 ft, sd in shale 2000 ft. Siegel Bros. et al's T. J. Taylor 1, F. O'Neal sur, lcn.

MARION COUNTY—Trammell et al's Hussey 1, Chas. Lockhart sur, elev 282 ft, top chalk 1771 ft, 8¼ inch cas 1514 ft, junk in hole, arr abn, td 1878 ft. Rondeau & Hindman's McGaugherty 1, W. J. Wills sur, sd 2450 ft. Hindman et al's Lindsey 1, Alex Albright sur, sd 400 ft. Shasta Oil Co.'s Johnson 1, Wm. Mason sur, rig.

PANOLA COUNTY—Knott et al's Marion Durham 1, Chas. Haley sur, 6⅝ cas 2670 ft, 5 3/16 cas 2977 ft, tested est 50,000 cu ft gas much sw 2998 ft, pulling 5 3/16 cas to r down, td 3190 ft. Smith et al's Hunt 1, Albert Johnson sur, dk. Bell et al's Burnett Lbr. Co. 1, S. B. Hendrick sur, elev 186 ft, 8⅛ cas 2027 ft, fsh tail bit, td 3228 ft. Warren & Dawes' McNeese 1, A. Booker sur, dk. Dillon & Bradham's Baldwin 1, Hampton West sur, 12½ cas 43 ft, sd 1188 ft. United Prod. Corp.'s Steele 17, B. C. Jordan sur, lcn (Trinity test). Neff et al's Brumble 6, B. C. Jordan sur, dk (Trinity test). Daisy O&G Co.'s Rucks Hrs. 1, Jno. Palmer sur, 12½ cas 780 ft, top chalk 1352 ft, cemtd 8¼ -inch cas 1900 ft. Ark. La. P. L. Co.'s Werner Sawmill 3, B. C. Jordan sur, 12½ cas 142 ft, dr lime 2520 ft. Everett Prod. Co.'s E. L. McDaniels 1, Alamson Barr sur, blew out making est 500,000 ft gas to 5 mil ft gas and 1500 bbls fresh water cratered, caught fire, trying kill, td 398 ft.

SABINE COUNTY—Loring Oil Co.'s Nona Mills Lbr. Co. 1, Jas. Mason sur, ta 4803 ft.

SHELBY COUNTY — Sloane Prospecting Co.'s T. B. Sandford 1, M. M. Vann sur, rig. Chapparral Oil Co.'s Holt 2, Matthew Moore sur, sd wo rotary, td 3111 ft. I. M. Bradley et al's J. J. Asberry 1, G. W. Mitchell sur, lcn.

TEXAS GULF COAST

AUSTIN COUNTY—O'Hara et al's Schrader 1, dr 3480 ft sand. Empire's Kunze 1, San Felipe, dr 6200 ft sand.

BRAZORIA COUNTY—Thos. Faust et al's Fee 6, 2 mi s Nash dome, dr 6220 ft shale. United Oil Synd.'s Speer 1, 3 mi n Danbury, sd 1600 ft. Mills Bennett's Randon 2, Allen, dr 5130 ft shale. Reese 2, dr 4430 ft shale. Freeport Sulphur Co.'s Fee 2001, Bryan Mound, set 6⅝-in cas 5260 ft. Layne et al's Wisdom 7-A, Damon Mound, dr 3640 ft shale. The Texas Co.'s Ewing 1, Manvel, dr 7480 ft shale. Rycade & Amerada's Seaburn 2, Stratton Ridge, dr 6930 ft shale.

BURLESON COUNTY—Mid South Oil Co.'s Duckworth 1, 2 mi e Clay Station, sd 2590 ft.

CALHOUN COUNTY—The Texas Co.'s Smith 1, Chocolate Creek, set 13⅜-inch cas 980 ft.

FORT BEND COUNTY—Gulf's Moore 28, dr 4040 ft shale.

GALVESTON COUNTY—Mars McLean's Cade 20, ru.

GRIMES COUNTY—Humble's Ciensiki 1-A, abn 1591 ft shale. Wainwright-West Oils, Ltd. and Triangle Corp.'s Templeman 1, 6 mi s Navasota, dr 4250 ft sand and shale.

HARDIN COUNTY—W. N. Hook's Walton 1, Lancaster sur, abn 1145 ft. Pearce & Proctor's Russell 40, Turnbow sur, lcn. The Texas Co.'s Fee 307, Sour Lake, stdg 3000 ft.

HARRIS COUNTY — Cypress Oil & Dev. Co.'s Kitzman 2, 2 mi n Cypress, ta 4430 ft. Gulf States Oil Co.'s Augspurger 1, dr 5450 ft shale. Ship Channel Oil Corp.'s Jones 19, Whiting sur, lcn. Smith-Hamill Dr. Co.'s Parsons 1, Jones sur, lcn. Tilton & Perot's Fee 1, Pierce Junction, ru. Humble's Minnetex 4, Mykawa, abn 6500 ft shale; Minnetex 5, ru. Kouri & Grayburg Oil Co.'s Bender 1, Pierce Junction, sdtr and cem 3940 ft. Rio Bravo Oil Co.'s G. H. & S. A. 102, Pierce Junction, dr 2030 ft sand. Smith et al's Fee 3, Pierce Junction, dr 1075 ft sand. Warner-Quinlan's Minchen 2, Pierce Junction, dr 3080 ft sand.

JACKSON COUNTY — Warner-Quinlan's Hungerford 1, 1½ mi of Edna, abn 4514 ft.

JEFFERSON COUNTY—Humble's McFadden 1, 8 mi e Big Hill, dr 5340 ft sand. Keith et al's Reed-Hankamer 1, 3 mi ne Westbury, dr 3700 ft sand and shale. The Texas Co.'s Pipkin 4, Big Hill, dr 4690 ft shale. Yount-Lee's McFadden 145, Humphrey sur, lcn.

LAVACA COUNTY—Cranfill-Reynolds' Hermes 1, Ryan sur, coring 4300 ft.

LIBERTY COUNTY — Cranfill-Reynolds' Davis 7, Kokernut sur, ru. J. R. Ingram's Hornbeck 1, 2 mi s Cleveland, abn 5633 ft. Texas Gulf Sulphur Co.'s Carter 2, Moss Bluff, abn in salt 1176 ft. Carter 3, Moss Bluff, ru. Hamm et al's Harvard 1, Davis Hill, sd 1000 ft. Gulf's Boyt 12, Hankamer dr 3850 ft shale; McFadden 3, Moss Bluff, dr 5920 ft shale Deering & Kayser's Pruitt 8, abn 1238 ft. Humble's Breeden 2, Moss Bluff, set 13⅜-in cas 2740 ft; Sergent 2, Moss Bluff, dr 4840 ft sand; Sterling 7, Moss Bluff, dr 5560 ft lime.

MATAGORDA COUNTY — Cockburn Oil Corp's Hawkins 2, Shepherds Mott, sdtr 5180 ft. Empire's Boker 1, Citrus Grove 1, sdtr 6070 ft.

MONTGOMERY COUNTY — Jno. Deering et al's Knight 1, 6 mi s Conroe, coring 4070 ft. Price & Wilhite's Juergus 2, 2 mi of Conroe, dr 3650 ft sand.

ORANGE COUNTY—Crews Oil Co.'s Mansfield 1, Hill sur, dr 1280 ft gumbo. Gulf's Vidor 1, 2 mi n Vidor, abn 6500 ft sand.

WASHINGTON COUNTY—Yegua Oil Co.'s Graves 1, 3 mi n Independence, ru. Penn-Tex Oil Co.'s Kamas 2, Brenham, fsh 950 ft. Sun's Caraway 5, Sperry sur, dr 1230 ft shale; Marcus 3, lcn.

LOUISIANA GULF GOAST

ACADIA PARISH—Yount-Lee's Houissiere 9, Evangeline, fsh 8666 ft.

ASCENSION PARISH—Gulf's United Land Co. 19, Sorrento, dr 3800 ft sand. Triumph Oil Co.'s Lacey 2, 4225 ft stdg.

AVOYELLES PARISH — M. L. Vincent's Morrow 1, sd 4220 ft.

CALCASIEU PARISH — Freeport Sulphur Co.'s Gray 1, abn 822 ft. Wilfred Lahay's Jardell 1, 2 mi e Vinton, sd 3250 ft. Vacuum's State 7, ru. Union Sulphur Co.'s Moss 2, Lockport, dr 4630 ft gumbo. J. O. Davis' In. Lbr. Co. 1, Starks, sw and slight oil show, now stdg 6560 ft. Crawford Doyle Tr.'s Johnson 1, Starks dome, sd 375 ft. Union Sulphur Co.'s Fee 749, Sulphur, comp. 188 bbls. 4119 ft; Fee 762, fsh 5500 ft.

CAMERON PARISH—Freeport Sulphur Co.'s Gulf Land Co. 7, Black Bayou, lcn; Yount-Lee 8, Black Bayou, dr cap rock 1080 ft, top 1055 ft. Shell's Watkins 16, Black Bayou, oil show 4213 ft; State 2, dr salt 4350 ft, top 4207 ft. The Texas Co.'s State Lake 7, Calcasieu Lake, lcn. Vacuum's Cameron Meadows 2, Cameron Meadows, dk. Magnolia's Sweet Lake Land Co. 2, Sweet Lake, dr 1660 ft sand. Pure's Yount-Lee 10, Sweet Lake, set 9⅝-in cas 6830 ft.

IBERIA PARISH—Jefferson Lake Oil Co.'s Lake Peigneur 10, Jefferson Island, bailed oil and small amt sw, estimated to pump 50 bbls oil, 1885 ft. Lake Peigneur 11, dk. The Texas Co.'s Vermilion Bay 6, Vermilion Bay, dr 3560 ft rock.

IBERVILLE PARISH—Standard's Gay 1, Bayou Choctau, sdtr 3975 ft; Gulf's Wilbert 8, dr 1040 ft gumbo. Standard of La.'s L. Baist 1, Bayou Blue, dr 1500 ft gumbo; Schwing 1-A, comp new dk; Schwing 3, sd 2990 ft. Wilbert 7, sd 75 ft; Case 2, Bayou des Glaise, lcn; Wilbert 8, Bayou des Glaise, abn 4295 ft. Texas Gulf Sulphur Co.'s Wilbert 8, Bayou Choctau, dr 200 ft gumbo; Wilbert 9, lcn.

JEFFERSON DAVIS PARISH—H. T. McCalin et al's Atterbury 1, Welsh, dr 5220 ft sand. A. V. Peters' Smith 1, Welsh, lcn.

PLAQUEMINES PARISH — Gulf's Burras Levee 2-B, Rose Dome, dr 2300 ft cap rock. Humble's Cockrell-Moran 2, Lake Grande Ecaille, sd 5000 ft.

ST. JAMES PARISH — Convent Oil Co.'s Jacobs 1, sdtr 1830 ft.

ST. LANDRY PARISH — The Texas Co.'s Botney Bay Lbr. Co. 9, Port Barre, dr 65 ft sand.

ST. MARTIN PARISH—Harrison and Abercrombie's Barras 1-A, dr 6300 ft shale. Humble's Woodward 1, Bayou Bouillon, fsh 5480 ft; State 4, dr 4480 ft shale.

ST. TAMMANY PARISH—Washington and St. Tammany Dr. Co.'s Coussack 2, stdg 2030 ft.

TANGIAPAHOE PARISH—Joan Dev. Co.'s Lake Superior Oil Co. 1, stdg 3010 ft.

TERREBONNE PARISH—La. Gas & Fuel Co.'s Minor Estate 1, Houma, dr 5260 ft shale. The Texas Co.'s Bay St. Elaine 1, Bay St. Elaine, rm and washing 1875 ft; Bay St. Elaine 6, lcn; Caillou Island 4, ru; Four Isle 5, Four Isle, dk; Lake Barre 6, Lake Barre, dr piling; Lake Barre 8, dr 4760 ft sand and gravel; Lake Barre 10, lcn; Lake Barre 11, lcn; Lake Barre 12, lcn; Lake Barre 13 lcn; Lake Barre 14, lcn; Lake Pelto State 4, Lake Pelto dome, dk; Lake Pelto 5, lcn.

VERMILION PARISH—Pure's S. W. La. Land Co. 1, dr 5480 ft lime.

WYOMING

BIG HORN—Westland Oil, Inc., 24-54-95, gas at 510 ft. Wisconsin Holdings, 5-55-97, sd 665 ft. Yellowstone Pete Co.'s 1, 7-57-97, sd 4080 ft.

CARBON—Midwest Refining Co.'s U. P. 1, 27-11-81, sd 1810 ft. Pete Expl. Co. of Calif., 29-23-89, dr 1000 ft.

CONVERSE—Converse O&G Co., 27-33-72, sd 1410 ft. Pioneer Oil Co., 5-31-70, to dr new test.

FREMONT—Texas Prod. Co.'s State 1, 36-44-95, sdtr 6⅝-inch at 4480 ft, prep to set cas, td 4485 ft. P. & R. 1, 33-34-92, sd 4906 ft. Yellowstone Oil Co.'s 1, 15-39-92, td 185 ft. Ward O&G Co., 28-34-90, gas show 1500 ft. Maghee et al, 2-35-99, dr 800 ft, last report.

JOHNSON—R. C. Tarrant et al, 4-43-82, to dd.

LINCOLN—Mountain Oil Corp.'s 1, 36-25-116, td 1500 ft. Wyo. Prod. Co., 14-42-113, dr bel 1000 ft.

NATRONA—Summit Oil Co., 21-33n-80w, sd 1220 ft, wait equip. Midwest's 11, nw 32-34n-77, stand sem 5340 ft. Cuyler Oil Co., 23-36n-85w, rig. Golden West Oil Co., 36-36-81, ready to res 1242 ft. Midwest's Midway 1, ne 23-35n-79w, prep to deepen to Lakota.

NIOBRARA—West Virginia Synd., 7-35-62, td 987 ft, cas trouble.

PARK—Resolute Oil Co., 17-57-101, dr 8343 ft.

SWEETWATER — Vermillion Oil Co.'s 1, se 16-12-99, sd 3500 ft.

UINTA—Park City O&G Co., nw 6-15-113, dr bel 2400 ft.

WASHAKIE—Dakota-Wyoming Oil Co., 6-ne 24-47-90w, small show 200 ft, to be cased off and dd. Ohio Oil Co., lot 14, 19-45-92, mvg in and rigging up.

COLORADO

ADAMS—N. M. Slatt's 1, se 27-26-6w, dr 2516 ft.

ARAPAHOE—McNebb Drlg. Co.'s Fitzsimmons 1, 7-45-55, stand 5735 ft, show some oil and gas. Merrett et al, U. P. 1, nw 17-5-65, stand 1600 ft, hfw.

BACA—A. R. Jones Oil & Optg. Co., Boice Cattle 1, 22-34-42w, stand 4750 ft.

EL PASO—Utemore Synd., Cannon 1, ne 10-16s-66w, stand 1100 ft.

HUERFANO—Parker Club, Fee 1, se 4-28s-68w, sdtr 5 3/16-inch cas, td 4116 ft.

JEFFERSON—Ruby Hill O&G Co.'s Braden 1, se 24-4s-69w, show of gas, dr 3873 ft.

LAS ANIMAS — Oklahoma Drlg. Assn.'s Tadcliffe 1, ne 28-28-52, sd 100 ft.

LA PLATA—McGarr Pete Co.'s Pinon Mesa 1, ne 34-33n-12, lcn. Klem Pete Corp.'s Olbert 1, se 9-25n-12w, stand 3125 ft. Murchison Oil Co., Doescher 1, nw 29-33n-12, sd 1225 ft.

LINCOLN—Eastern Colo. Oil Corp.'s State 1, 36-14n-57w, wtg for boiler at 3370 ft.

MOFFAT—Mtn. Fuel Supply's State 2, tract 37-12-100, rig burned, td 2180 ft. S. H. Keoughan et al's State 1, sw 16-4n-101w, sd 2950 ft.

MONTEZUMA—Haller et al's Haller 4, sw 4-36-14w, dr 146 ft.

MONTROSE—Uncompahgre O&G Co., Colo. Title & Trust 1, 27-50n-10w, ready to spud.

MORGAN—Ind. Terr. Illum. Oil Co.'s State 1, ne 16-1n-57w, dr 4206 ft.

PUEBLO—Anchor Oil Co.'s Easley 1, sw 35-22s-67w, sd 520 ft.

PARK—So. Park Oil Co.'s Milligan 1, se 13-9s-76w, ur 8¼-inch at 1810 ft. So. Park O&G Co.'s Eache 1, ne 6-9s-76w, sd.

ROUTT—Ingersoll et al's Omholt 1, 29-4n-87w, sd 115 ft.

WELD—Eastman Oil Co.'s Steele 1, ne 14-2n-67, sd 165 ft.

WASHINGTON—Middlemist Oil Co'.s Middlemist 1, se 14-4-56, stand 1710 ft.

NEW MEXICO

CHAVES—Warman Oil Trust, Siebert 1, ne 27-13-24, ur to 2045 ft.

DE BACA—Matador Oil Co.'s Wood 1, se 6-4n-20e, to res at 3005 ft.

HARDING—Milwaukee Synd., Kerlin 1, se 34-21n-30e, dr at 400 ft.

LUNA—Angelus Oil Mining Assn.'s 1, se 20-21s-10w, dr 6028 ft.

McKINLEY—J. W. Halsell's Santa Fe 1, 17-18-9w, sd 3255 ft. Wms. et al's A. T. S. F. 1, se 49-18-8w, stand 2250 ft. United Kern ePte Inc., 1, sw 1-18n-11w, lcn. Dysart et al, Dysart 2, ne 14-14n-10w, dr 800 ft.

OTERO—Ernest et al's 1, se 20-25s-7e, wtg for equip., 1328 ft.

QUAY—Silverstein et al, Wetzel 1, 29-12n-32, stand 175 ft.

RIO ARRIBA—Berrenger et al's Hartman 1, ne 8-29n-7w, sd 825 ft. San Jaun Pete Co.'s Gov't 1, se 14-30n-7w, sd 250 ft. Governador Oil Co.'s 1, se 12-29n-7w, sd 750 ft.

SAN JUAN—Dorothy Oil Co.'s Terwilliger 2, 29-30-9w, stand 1750 ft. Kutz Canon O&G Co.'s Day 1, se 20-28n-10w, dr 2410 ft. Childers Dr. & Pr. Co.'s Westwater 2, nw 23-31-16w, sd 2525 ft. Rio Grande Dev. Co.'s 2, 9-29-11, prep to res 1380 ft. Continental Oil Co.'s Rattlesnake 24, 1-29n-19w, fsh 4730 ft for dr pipe. J. B. Witt O&G Co.'s Magnum 1, se 33-29n-11w, lcn. San Juan Leaseholds, Bowman 3, ne 30-30-15, dr 2630 ft. Reserve Oil Co., Reserve 3, se 36-22n-14w, dr 385 ft.

SAN MIGUEL—Pioneer O&G Co.'s Thunderbird 1, nw 14-15n-16e, wait 2340 ft. Starr Oil Co.'s Adams 1, ne 25-17n-16e, dr 3380 ft. Cibola Pete Co.'s Crown 1, se 9-13n-14e, stand 750 ft. Hershfield Dev. Co.'s Cabra Springs 1, ne 12-12n-22e, prep to res at 1415 ft. Kull et al, Cherryvale 1, ne 34-17n-21e, prep to case, td 440 ft.

TORRANCE—Williams et als Staplin 1, ne 16-8n-10e, prep to res 1643 ft. J. B. Witt O&G Co.'s Kuthem 1, 12-17-7e, dr 1475 ft.

VALENCIA—Acme Oil Co.'s N. M.-Ariz. Land Co.'s 1, ur to 4958 ft. Harlan et al, Harlan 1-A, 5-6n-2e, dr 5845 ft.

MONTANA

BIG HORN—Continental Oil Co., 21-6s-35e, resum 3400 ft.

CARTER — Montasota O&D Co., 7-8s-50e, prep to res 1060 ft.

CASCADE—Andover Oil Co.'s Floweree 1, se 20-21-2w, sd 1405 ft. Lone Star Mont. Oil Co., McLean 1, se 13-21-3e, dr bel 800 ft.

CHOTEAU — Williston-Shelby O&G Co., Flack 1, se 12-28-11e, run 5-inch to s.o.w. at 2845 ft.

FALLON—Carter & Co., 12-4n-61e, sd 490 ft.

FERGUS—Northern States Oil Co.'s Woodward 1, se 20-14n-24e, ream 6-inch to s.o.w. 2845 ft. Melton Corp., 24-21n-17e, dr 2850 ft. Pownam Oil Co., 24-19-11e, to res 200 ft.

GALLATIN — Gallatin Valley Oil Co., nw 1-1n-4e, prep to res at 300 ft.

GLACIER—Fulton Pete Corp.'s Blackfeet 1, ne 28-36n-12w, td 1300 ft, caving and cementing. B. & H. Oil Co.'s Haines 1, se 2-34-6w, dr on iron, td 2762 ft. Jeffries-Hoerr's Dawson 1, ne 7-31-12w, em off iron, td 2980 ft.

GOLDEN VALLEY—Texas-Pacific's 1, sw 21-8s-21e, try for wso at 2650 ft. J. Dealey et al's 1, ne 28-5n-22e, to resume.

HILL — Jones-Rice-Perkins, se 28-33-12w, plugg back from 1140 ft to s.o.w.

JUDITH BASIN—Newton-Waddingham, se 15-16n-10e, dr bel 1110 ft.

LIBERTY—Northland O&G Co.'s Yurman 1, 32-33-5e, to res 3475 ft. Sunburst, McLaren 1, se 9-37-6e, sd 3115 ft. Utopia Oil Co.'s Eleanor Ass'n 1, sw 11-33-6e, fsh, td 3214 ft, hfw. Perkins et al, Brown 1, nw 24-35-4e, dr 200 ft.

POWDER RIVER—Creel et al, 7-8s-50e, dr 1200 ft.

ROSEBUD—Prairie O&G Co., 1-X, 26-10-39e, dr up urr, td 2325 ft. Prairie's 1, Contract 4, 28-10-38, sd 1360 ft because of bad weather.

TETON—Andover Oil Co.'s Carlson 1, 5-24-4w, stand 150 ft.

TOOLE—Liquid Gold Oil Co.'s Roberts 1, ne 25-36-12, gas ignited, rig burned, 2150 ft. International Roy. Hold. Co.'s Henry 1, sw 26-35-36, pipe trouble 2590 ft. A-1 Pete Co., se 24-36-1e, dr bel 1500 ft.

YELLOWSTONE—Peter Antonioli, 21-2n-25e, dr bel 500 ft, last report.

MISSISSIPPI

Company, Well and Location	Initial Production Bbls.	Depth
HINDS COUNTY—		
Miss. Pet. Co., Solvent 1, 14-5-1w..	*	3074

CLARKE COUNTY (Quitman Dist.)—Gulf Ref. Co.'s Box 1, nw se 11-2n-15e, elev 221 ft, sp cemtd 15¼ cas 105 ft.

CLAY COUNTY—Ohio Oil Co.'s Cantrell 1, ne ne 16-15-5e, elev 270 ft, 13⅜ cas 1389 ft, fsh bit in sandy shale 2920 ft.

COVINGTON COUNTY (Collins Dist.)—Miss. Gulf O&G Co.'s Pope 1, nw ne 35-8n-16w, 12½ cas 126 ft, top Wilcox 2100 ft, ta in sandy shale 3000 ft. United Prod. Corp.'s McIntosh 1, sw ne 5-8n-16w, elev 321.5 ft, 12½ cas 805 ft, sd with junk in hole, td in Wilcox 3378 ft.

CHICKASAW COUNTY — Hightower & Golsan's Fleming 1, 20-13s-3e, sd 1562 ft.

GRENADA COUNTY — Carter Oil Co. et al's Dubard 1, nw nw 18-22-4e, top Selma chalk 1787 ft, top Eutaw 2612 ft, tested artesian water 2974 ft. dr conglomerate 3281 ft.

HINDS COUNTY (Jackson Dist.)—Miss. Pet. Co.'s Solvent 1, sw sw 14-5-1w, top Midway shale 2970 ft, junked abn, td 3074 ft. Gulf Ref. Co.'s McLaurin 1, sw ne 30-6-2e, top Midway shale 2392 ft, 9-in 2466 ft, top chalk 2485 ft, sdtr at 2485 ft, dr in 3rd hole 2578 ft; School Board 1, ne sw 16-6-1e, elev 331 ft, 13-inch 108 ft, top Midway shale 2675 ft, ta 2707 ft. Atkisson et al's Valentine 1, 18-5-2e, lcn.

JASPER COUNTY (Bay Springs Dist.)—Bay Springs Pet., Inc., J. H. Keyes 1, nw ne 21-2n-10e, 15½ cas 104 ft, dr 180 ft.

KEMPER COUNTY (De Kalb Dist.)—W. W. Jones' Rosenbaum 1, lcn not given, dk.

LA FAYETTE COUNTY—F. E. West et al's May 1, 22-10s-4w, rig.

MADISON COUNTY (Jackson Dist.) — Central O&G Co.'s Cameron 1, 11-9n-1e, 10-inch 201 ft, 6⅝ 1532 ft, top Midway 2506 ft, dr hd black slate 3165 ft.

MONROE COUNTY (Amory Dist.)—Amory Dev. Co.'s Bourland 1, sw ne 2-15-19, sd in brown sand 3007 ft. P. J. McAlpine's Cowart 1, ne sw 2-12-19, 10-inch 694 ft, 8¼ cas 1276 ft, dr brown shale 1620 ft. Associated Royalties' School Board 1, sw se 16-15-17, sd 60 ft. Amory Pet. Corp.'s Harris 1, nw nw 18-13s-17w, 10-inch top Palezoic rock 478 ft, dr sand shale and trace lime 1620 ft.

RANKIN COUNTY (Jackson Dist)—Love et al's Muse 1, se se 32-7-4e, 12½ cas 600 ft, sd in sandy brown shale 2208 ft. Love Pet. Co.'s Moore 1, se nw 28-6-2e, sd 900 ft. Millstein O&G Co.'s Gammill-Hartfield 1, sw ne 6-5-2e, hf fluid wo 2500 ft.

SMITH COUNTY (Raleigh Dist.)—Pocahontas Nat. Gas Co.'s Adams Banks Lbr. Co. 1, ne sw sw 10-3n-7e, elev 425 ft, r to set 10-inch cas 450 ft in gumbo.

WARREN COUNTY (Vicksburg Dist.)—Dixie Pet. Co.'s Clark 1, nw nw 6-16n-5e, elev 278 ft, 12½ cas 77 ft, cemtd 8¼ cas 2186 ft (corrected depth), bailed dry, td in Sparta 2248 ft. Vicksburg O&G Co.'s Dornbusch 1, sw ne 8-18-5e, sd 1600 ft.

WEBSTER COUNTY — Cumberland Oil Co.'s Henley 1, 15-21-11, ta 1865 ft.

WINSTON COUNTY (Louisville Dist.)—Miss. Drilling Co.'s Scarbrough 1, nw nw 15-13n-14e, missed ds test, tester failed open, in sand 2379 ft.

YALABOUSHA COUNTY (Water Valley Dist.)—J. D. Collett et al's Blackmer 2, sw nw 14-11s-4w, 12½ cas 103 ft, 8⅝ cas 2426 ft, dr plug.

ALABAMA

SUMTER COUNTY — Forked Lightning O&G Co.'s Nixon 1, sw ne 30-20n-2w, dk.

WASHINGTON COUNTY—Hobson et al's Wilson 1, 27-7-1w, sd in limey shale 881 ft; Hobson Bros. 1, 9-8-2w, sd 1450 ft. Oscar Brown's U. S. Land & Cotton 2, 25-3-2w, sd 700 ft.

TENNESSEE

DECATUR COUNTY—Chester County O&G Co.'s Montgomery 1, arr res dr 2075 ft.

NORTH LOUISIANA

Company, Well and Location	Initial Production Bbls.	Depth
DE SOTO PARISH (Holly)—		
Standard Oil Co. of La., Farmer A-6, 5-13-13	*	2916
CONCORDIA PARISH—		
Ark. La. P. L. Co., Alexander 1, 47-8n-9e	*	3010
SABINE PARISH—		
D. H. Reddick, Tr., Scretchfield 1, 18-9-12	*	3310
Lawrence et al, Hubly 1, 21-7-11, (sec. comp.)	*	2650
Wilsons & Sons, Gandy-Garrett 1, 4-5-12	*	2509

BIENVILLE PARISH—Jamestown Synd.'s

Lawhon 1, sw ne 15-16-8w, show gas sandy shale in Tokio 2860 ft, cemtd 6-inch cas 2863 ft, td 2866 ft.

BOSSIER PARISH—Andrews & Davlin's Nattin 1, 15-22-14, dry 2062-67 ft, sd 2200 ft. H. I. Morgan et al's Kendricks B-1, ne sw 22-19-11, 10-inch 147 ft, blew out est 20 mil ft gas, dropped 33 thribbles ds, bridged over, wo, td 1702 ft. Rambaugh et al's Allison 1, 10-19-13, tested dry, sd 1100 ft. R. O. Roy's W. H. Hodges 1, 19-16-10, 12½ cas 140 ft, dr shale and gumbo 1100 ft.

CADDO PARISH—United Gas Pub. Serv. Corp.'s Emmons 1, ne sw 27-23-16, 12½ cas 363 ft, cemt 9-inch cas 3635 ft; Fortner 1, nwc frac. sec 5-22-16, dr 5040 ft. G. M. Gordon's Hatcher 1, ne nw 11-17-15, lcn (to be 5500 ft test). Pyramid O&G Co.'s Wheeler 1, se sw 9-18-16, 10-inch cas 450 ft, dr 1380 ft. Libby et al's Foster 1, 29-15-16, dr 2910 ft. Ralph Davidson et al's Felix Weiller 1, 33-17-13, 10-inch 40 ft, dry thru ds 1802-1942 ft.

CATAHOULA PARISH—National Drilling Co.'s Marsh McMillian 1, 26-9-6e, 6⅝ cas 2796 ft, tested sw, sd 3086 ft.

CALDWELL PARISH—Hudson et al's Burton 1, 36-12-2e, sd in shale 2561 ft. Carter Bell et al's Taylor 1, 42-14-4e, dk.

CLAIBORNE PARISH — Baird Bros. et al's Whittaker 1, 30-20-7w, fsh ds, td 2415 ft. La. O. R. Corp.'s Langston 10, 19-21-7w, 9⅝ cas 2438 ft, sd wo in lime 4500 ft.

CONCORDIA PARISH — Fred Stovall's Grasmere 1, 23-8n-10e, 8-inch 152 ft, dr 1025 ft. United Pub. Serv. Corp.'s Saunders 3, 42-8n-10e, 12½ cas 160 ft, tested dry thru ds 1415 ft, tested est 2 to 3 mil ft gas 1438 ft, cemtd 9-inch cas 1400 ft, td 1438 ft. Ark. La. P. L. Co.'s (formerly carried Ark. Fuel Oil Co.) Alexander 1, 47-8-9e, 12½ cas 152 ft, sw 1975-83 ft, dry abn in gumbo, td 3010 ft. Joe Marr et al's Maxwell 1, 38-3-8e, sd 3622 ft.

DE SOTO PARISH—W. H. Weichert's H. Smith 1, 31-14-15, top gas sand 1653 ft, top chalk 1901 ft, sd 2350 ft. Standard Oil Co. of La.'s L. Farmer A-6, ne nw 5-13-13, 10-inch 84 ft, dry abn in red shale 2916 ft. Neff et al's Ramsey 1, 33-13-16, 12½ cas 80 ft, dr 2736 ft. S. A. Guy et al's Dowling Bros. 1, 31-14-14, sd 1354 ft.

NATCHITOCHES PARISH—C. M. Talley et al's Talley 1, 29-11-10, 10-inch 60 ft, claim small show gas in ds test 1256-69 gy, arr set 6-inch cas with packer to test. Gulf Ref. Co.'s Bodcaw Lbr. Co. 1, sw ne 13-13-8w, 12½ cas 930 ft, dr lime and shale 3892 ft. W. M. Coates et al's Collins 1, 28-9-10, base chalk 2612 ft, dr 3870 ft. J. W. Cooper et al's Cooper 1, 35-11-10, dry in sandy shale 2829-32 ft, dr lime 3025 ft; Cooper 2-A, 35-11-10, top chalk 1400 ft, claim show oil and gas, arr ds test, td 1515 ft.

RED RIVER PARISH—Lucky Strike Oil Co.'s Chaffraix 1, 33-12-10, tested est 500 bbls sw show oil 2820-3010 ft, sd 3010 ft.

SABINE PARISH—Pearce, Tr.'s, Pearce 1, sw sw 10-7-11, 6⅝ cas 2339 ft, wosr, td 2600 ft. Lawrence et al's Hubly 1, 21-7-11, dry abn, td 2650 ft, (sec. comp.). J. C. Walton's Sabine 1, ne nw 11-7-12, sd 1930 ft. Lacey Jesup Oil Co.'s Brown Lbr. Co. 1, se ne 28-8-10, 6-inch at top marl 2256 ft, top chalk 2690 ft, sd 3160 ft. Lacey Pet. Co.'s Cooper 1, 30-8-11, top chalk 2306 ft, 6⅝ 2270 ft, hfo wosr, td 2620 ft; Cooper 3, sw ne 30-8-11, rig. D. H. Reddick et al's Scretchfield 1, 18-9-12, dry abn, td 3310 ft. P&G Oil Co.'s 21-7-12, lcn abn. Trans-America Oil Co.'s Carter 1, 36-8-12, top marl 2311 ft, 6-inch 2211 ft, 700 ft oil in hole, wo, td 2540 ft. Jean Longoria's Belton 1, 31-9-13, ap set 10-inch cas 103 ft. Franks et al's Dew 1, 22-8-11, 6-inch 2111 ft, top marl 2265 ft, bailing showing some oil, td 2380 ft. Triangle Pet. Co.'s Sabine 2, 36-8-12, dk pat. D. M. Lide's Ponder 1, 15-7-11, top marl 2393 ft, top chalk 2407 ft, 6-inch 2385 ft, hfo wosr, td 2800 ft; Ponder 2, nw ne 15-7-11, 10-inch 102 ft, 6⅝ cas 2364 ft, show oil 2420 ft, arr deepen. Wilson & Sons' Gandy-Garrett 1, 4-5-12, dry abn ,td 2509 ft. Jno. Woodley's Sabine 1, ne se 12-8-12, 10-inch 103 ft, cemtd 6⅝ cas 2310 ft. H. W. Perritt's Bowman-Hicks 3, 2-7-12, 10-inch 96 ft, dr 1865 ft. Diffie & Barrett's Lites 1, se nw 34-8-11, 10-inch 105 ft, wo. J. M. Thompkins' Stoker 1, 10-7-11, 10-inch 105 ft, 6⅝ 2362 ft, dry 2520 ft, wo. Magnolia Pet. Co.'s Lucius 1, nw ne 2-5n-12w, 13⅜ cas 204 ft, show oil 2595-99 ft, base hd lime 4060 ft, sandy shale 4068 ft, dr hd sand

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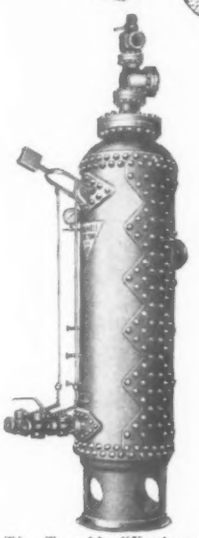

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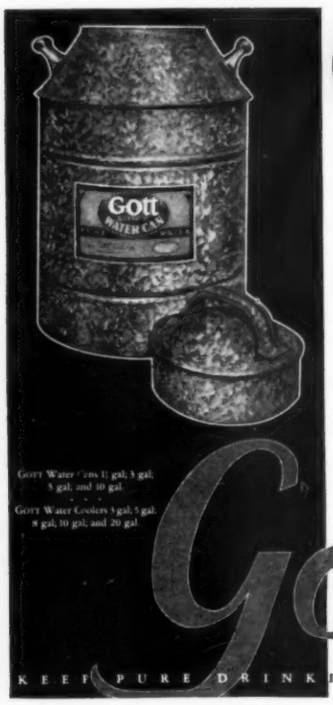
4136 ft. Gautier et al's Meshell 1, se nw 30-8-12, 10-inch 100 ft, fsh ds 1800 ft. Ohio Oil Co.'s Bowman-Hicks 6, se nw 2-7-12, 10-inch 203 ft, 6⅝ 2200 ft, 1800 ft oil in hole, wosr, td 2509 ft; Bowman-Hicks 7, ne ne 2-7-12, sp 10-inch 100 ft. Durham Oil Co.'s Polly 1, sw ne 18-8-12, 10-inch 105 ft, 8¼ cas 2087 ft, sd 2102 ft. Packard Oil Co.'s Davis 1, sw sw 8-7-10, 10-inch 80 ft, dr 1888 ft. Merritt, Tr.'s, Byrd 1, se nw 1-7-11, dr 1862 ft. Frank Buttram et al's Hale 1, ne ne 1-7-13, top marl 2066 ft, 6⅝ cas 2068 ft, swabbing 7 bbls oil hour, td 2354 ft. Bradley Drilling Co.'s Newton 1, nw se 25-8-12, 10-inch 100 ft, 6⅝ 2360 ft. W. M. Coates' Sabine 2, 2-7-12, sp 10-inch 100 ft, dr 500 ft; Sabine 3, 1-7-12, dk. Loring Oil Co.'s Bowman-Hicks 16, nw nw 9-7-12, lcn (to be 6000-7000 ft test).

TENSAS PARISH—Seip et al's Fowler 1, 10-10-10e, sd 905 ft. A. R. Willis' Curry 1, 39-11-12, sd 3148 ft.

VERNON PARISH—Smith, Weir et al's Fee 1, ne ne 14-2n-11w, lcn.

WEBSTER PARISH—D. M. Coyle's Frazier 1, ne se 27-23-11, dk. Cassidy & Davis' Nickerson 1, ne sw 29-23-10, sd 160 ft. Red Hawk Oil Co.'s Matthews 1, se nw 11-23-9, sd 250 ft.



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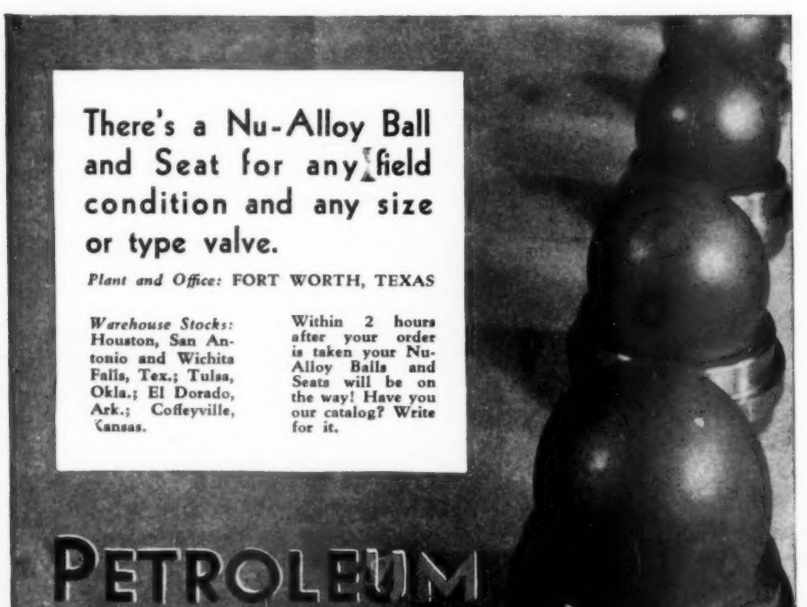

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JON R. LONG, MANAGER

SOUTHERN CALIFORNIA

Company, Well and Location		Initial Production Bbls.	Depth
PUENTE HILLS—			
Vega Pet. Corp.'s Rowland 1.....	*	2545	

ALHAMBRA—Fred H. Hammer's Huntington Land 1, sd 3393 ft.

BELL—Cudahay Community Oil Assn.'s No. 1, 30-2-12, dr shale 715 ft.

CORONA—Western Gulf's Abacherli 1, 12-3-8, 10¾inch cas cmt 2000 ft, td 2365 ft, will drill out cmt and make test.

CULVER CITY—Olympic Oil & Realty Co.'s No. 1, 14-2-15, fsh for drill pipe, td 4837 ft, 12½-inch cas split. Taylor Oil Co.'s Culver 1, lcn; No. 1, 12-2-15, dr shale 6000 ft.

EL MONTE—Rancho Oil Corp.'s Harmon 1, 30-1-11, dr gray sand 4000 ft.

FULLERTON — Standard's Bastanchury 1, 21-3-10, dr hard gray sand 7990 ft.

HERMOSA BEACH—Calico Royalty Series' No. 3, 6-4-14, dr shale and hard sand 738 ft. California Ventura Oil Co.'s Sadler 2, 31-3-14, pumping mud and oil, td 3330 ft. Corniel Oil Corp.'s No. 1, 31-3-14, dr shale 2565 ft. Smith Pet. Co.'s No. 1, 6-4-14, rig. R. C. Thomas' No. 1, 6-4-14, lcn.

NEWHALL — Consolidated Oil Co.'s Hammond 1, 8-3-16, dr shale 2568 ft. Electrological Pet. Corp.'s Overman 1, 6-3-16, rig. Southern California Drilling Co.'s Needham 5, 13-3-16, rig. York and Smullin's Clampitt 6, 13-3-16, rig.

NEWPORT—Nuoil Co.'s No. 1, 29-6-10, dr shale 1078 ft. Standard's Irvine 1, 26-6-10, coring 3750 ft.

OLIVE—Texas' Community 1, 7-4-9, dr sand 3166 ft.

PLAYA DEL REY—Mesmer City Realty Co.'s No. 1, 24-2-15, dr shale 900 ft. West Port Pet. Corp.'s No. 1, 27-2-15, re-dr 5615 ft.

PUENTE—Rucker and Sproul's Grazide 2, 22-2-10, dr shale 1765 ft.

REPETTO HILLS—Texas' F. M. 1, 4-2-12, dr hard sand 2150 ft.

SAN FERNANDO—San Val Oil Co.'s No. 1, 14-1-16, will run cas, td 2045 ft.

SANTA MONICA—Hines Pet. Corp.'s No. 1, 8-2-15, dr out cmt, td 1700 ft.

SAN JUAN CAPISTRANO—Okay No. 2's Foster 2, 13-8-8, sd 5220 ft.

TORRANCE—C. M. Sheeley's No. 1, 12-4-14, rig.

WILMINGTON — York and Smullin's Olympic-Watson 1, 29-4-13, new rig. Wilmington Cons. Oil Co.'s No. 1, rigged to sp.

NORTHERN CALIFORNIA

TULARE COUNTY—			
Grand View Oil Co.'s No. 1	8-23-28	*	250

KERN COUNTY

BELRIDGE—Belridge Oil Co.'s No. 27-8, 27-27-20, plugged to 985 ft, td 3730 ft, sd; No. 27-64, 27-27-20, dr 1100 ft; No. 35-8, 35-27-20, dr brown shale 2915 ft; No. 35-33, 35-27-20, dr hard shale 3522 ft; No. 35-48, 35-27-20, dr shale 4400 ft; No. 35-49, 35-27-20, rig. Tom Bannon's Fay 1, 18-20-22, rig. Casa Mira Oil Co.'s Theta 2, 29-28-29, rig. Continental's Result 2, 36-27-20, rig. General Pet.'s Berry 1, 30-28-21, sr 3605 ft. Ohio's Bloemer 1, 36-27-20, will make test, td 5815 ft. Reward Oil Co.'s Associated 4, 34-27-20, dr shale 3969 ft. Richfield's Belridge 1, 22-27-20, continuing production tests, td 6639 ft, plugged to 5457 ft, bailing water and mud. Standard's McPhail 2, 36-27-20, dr shale 4775 ft. Texas' Martin 1, 22-27-20, dr shale 4665 ft. Union's Belridge 17, 36-27-20, dr oil sand (Temblor) 5200 ft. K. C. Wallace's No. 1, 32-29-21, dr hard brown shale 4177 ft.

BUENA VISTA HILLS—Fed al Drilling Co.'s No. 6, 21-31-24, bailing oil an water, td 5270 ft.

BUTTONWILLOW—Wilshire Oil Co.'s Nordon-Salisbury 1A, 7-29-24, co 6590 ft.

CARIZZO—Panorama Oil Co.'s Panorama 1, 7-31-21, re-dr 2700 ft.

DELANO — Chanslor-Canfield Midway Oil Co.'s Villard 1, 31-25-28, dr shale and hard sand 1850 ft, found Jewett formation at 1805 ft.

DEVIL'S DEN—Tom Hannon's No. 1, 25-

25-18, sr 2625 ft. Standard's Alferitz 1, 14-25-18, dr brown shale 2150 ft.

McKITTRICK — California Oil Producers' Wisecarver 1, 30-30-22, sd 5545 ft.

SEMITROPIC—Shell's Williams 1, 17-27-23, dr out cmt below 5¾-in cas at 8575 ft, td 9700 ft.

TEMBLOR HILLS—Kent and McDonald's No. 1, 3-32-22, dr shale 1717 ft.

WASCO—Cities Service Pet. Co.'s Prospect 2, 16-28-24, dr shale 600 ft for preliminary test of district.

WEED PATCH—Alpine Oil Co.'s DiGiorgio 1, 13-31-29, rigging up rotary. Mohawk Oil Co.'s Diorgio 1, 4-31-29, rig; Wharton 1, 32-30-29, cmt 8⅝-in cas 5645 ft, td 5965 ft, will make production test. Shell's Morris 1, 32-30-29, dr shale 3490 ft;. Porter 1, 29-30-29, dr shale 5695 ft; Porter-Day 1, 39-30-29, dr hard sand 7538 ft.

SANTA BARBARA COUNTY

COAL OIL POINT—Bolsa Chica Oil Corp's Augur Permit 1, 24-4-29, trying to make well produce, td 4190 ft, plugged to 4155 ft.

GATO RIDGE—Barnsdall's Tognazzini 1, 9-8-32, fsh for drill pipe, 6030 ft.

GOLETA—General Pet.'s James 1, dr shale 1400 ft; More 3, re-dr 4690 ft.

ORELLA—General Pet.'s Erburu 10, ready to sp. Prairie Oil and Gas' El Capitan 1, dr shale and red sand 3626 ft.

PURISIMA — Vaqueros-Major Oil Co.'s Union Annex 3, dr hard shale 1500 ft.

SANTA MARIA—Western Gulf's Bradley 1, 5-9-33, dr shale 5685 ft.

VENTURA COUNTY

BARDSDALE—Cox Bros.' No. 1, 12-3-20, rig.

FILLMORE—Associated's Young 1, 16-4-20, grading for lcn.

HOPPER CANYON — Bardeen Pet. Co.'s No. 1, 13-4-19, new lcn.

OJAI—Dreadnaught Oil Co.'s Canet 1, changing to heavier equipment, td 2120 ft. Knudsen and Schmidt's No. 1, 12-4-23, sr to cmt cas, td 965 ft.

OXNARD—Magu Synd.'s Utt 1, rigging up rotary.

RINCON — Charslor-Canfield Midway Oil Co.'s Hobson A2, 23-3-24, dr shale 8500 ft. Continental's Grubb 1, 23-3-24, sp.

SANTA MONICA MOUNTAINS—Olympic Corp.'s Calabasas 1, 18-1-17, making production test, td 5685 ft, well will not flow.

SANTA PAULA—San Pedro-Pt. Fermin's Kellerman 2, 13-4-21, dr shale 2919 ft.

SESPE—Merchants Pet. Co.'s Cochran 1, 1-4-20, dr shale 665 ft. Superior's Kirtlan 1, 15-4-21, dr shale 5598 ft.

TIMBER CANYON—Petro Well Producing Co.'s No. 4, 18-4-20, will deepen from 1100 ft.

VENTURA—Prairie Oil & Gas' Sexton 1, 30-3-22, dr hard sand 8785 ft.

MISCELLANEOUS

FRESNO COUNTY—Associated's Mitchell 1, 22-21-15, dr hard gray sand 4028 ft.

KINGS COUNTY—L. W. Seymour's No. 1, 10-23-16, dr out cmt, td 1010 ft. T. H. Purman's Avenal 1, 36-23-17, will drill from 2540 ft. Kettleman Lakeview Oil Co.'s No. 1, 11-23-19, co 1285 ft. Murphy Oil Co.'s Brennan 1, 20-23-20, dr shale 3717 ft.

MENDOCINO COUNTY—Twin State Oil Co.'s Soldani 1, 14-12-17, dr shale 6140 ft.

SAN LUIS OBISPO COUNTY—Paso Robles Synd.'s Emerick 1, 34-27-11, sdtr bailer 3910 ft. Continental's Hellman 1, 26-25-11, coring 4665 ft. J. D. Martin's Pricco 2A, 5-31-13, plugging bottom, td 2965 ft.

SANTA CRUZ COUNTY—Wellton Oil and Gas Co.'s Galletly 1, dr cmt below 6⅝-inch cas at 2665 ft, td 2880 ft.

TULARE COUNTY — Big Four Drilling Co.'s No. 1, 29-23-27, co 4330 ft. Turk and Campbell's Nevins 1, 34-22-27, dr out cmt, td 1392 ft. Inland Valley Oil Co.'s Smith-Rea 1, 24-17-24, co [illegible]75 ft.

ARKANSAS

Company, Well and Location	Initial Production Bbls.	Depth
HOT SPRINGS COUNTY—		
Cleary Bros. et al, Hinson 1, 19-4s-16w	*	1604

CHICOT COUNTY—H. R. Smith's Lytle 1, 31-18-3, cemtd back to 2865 ft, sd, old td 2925 ft.

CLAY COUNTY—S. C. Jeffus, Tr.'s, Underwood 1, nw ne 4-20-8e, dr shale 945 ft.

CLEBURNE COUNTY — Donnell et al's Fee 1, 33-11-9, sd 3740 ft.

CRAWFORD COUNTY—Citizens Gas Co.'s Hood 1, ne se 18-9n-32w, sp dr 730 ft.

DALLAS COUNTY—John James, Tr.'s, Fordyce Lbr. Co. 1, ne nw 11-9s-15w, 10-inch 176 ft, missed core 2055 ft, arr make ds test 2035-2055 ft, td 2055 ft. E. C. Brewer, Tr.'s Hillman 1, se ne 20-10-13, pulled 10-inch cas at 88 ft, re-set 138 ft, sd 4 joints ds in hole, td in lime 2644 ft.

GARLAND COUNTY—H. H. Given's Garrett 1, 1-3n-19w, cas pulled, hfsw, td 3756 ft.

GRANT COUNTY — Spann & McClung's Sarah Page 1, sw nw 3-3-12, sd 438 ft.

HOT SPRINGS COUNTY—John Watkins, Tr.'s, Cunningham 1, 11-5-16, sd 100 ft. Cleary Bros. et al's Hinson 1, 19-4s-16w, 11 ft water sand abn, td 1604 ft.

JOHNSON COUNTY — Blackwell O&G Co.'s Wyver 1, 21-8-23, ta 5600 ft.

LA FAYETTE COUNTY—Crawford Drilling Co.'s Vaughan 1, 25-19-25, rig. McIver et al's Hattle 1, nw ne 1-20-26, 12½ cas 115 ft, sd for fuel 2345 ft. Smitherman & McDonald's Reed 1, se nw nw 16-15-22, 12½ cas 42 ft, tested 3 joints mud show oil thru ds in 1 hour 1172-94 ft, 8¼-inch cas 1176 ft, bailed fluid off bottom, rose 150 ft in sw show oil, wo sand tester, td 1194 ft. Cosby Prod. & Royalty Co.'s Biddle 1, ne ne 1-20-26, lcn.

LAWRENCE COUNTY—Marguerite Dev. Co.'s Broadway 1, 31-17-1, sd 45 ft.

LITTLE RIVER COUNTY—Fay Roberts Oil Co.'s Russell 1, nw nw 25-12-29, lcn.

LOGAN COUNTY—M. W. Greesom's Parks 1, 21-8-24, sd 1309 ft. J. H. Flowers' White 1, 13-5-26, sd 3610 ft.

MADISON COUNTY—J. W. Baxter's Hallem 2, cent. sec 17-16-26, sd 405 ft; Hallem 3, ne sw 1-17-26, sd 42 ft.

MILLER COUNTY—E. & F. Oil Co.'s E. L. Beck 1, 36-15-26, 6⅝ cas 2792 ft, 4½ cas

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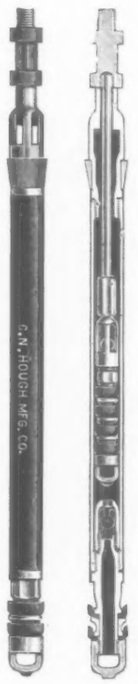

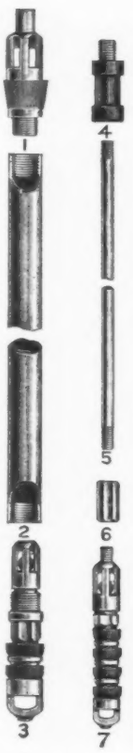

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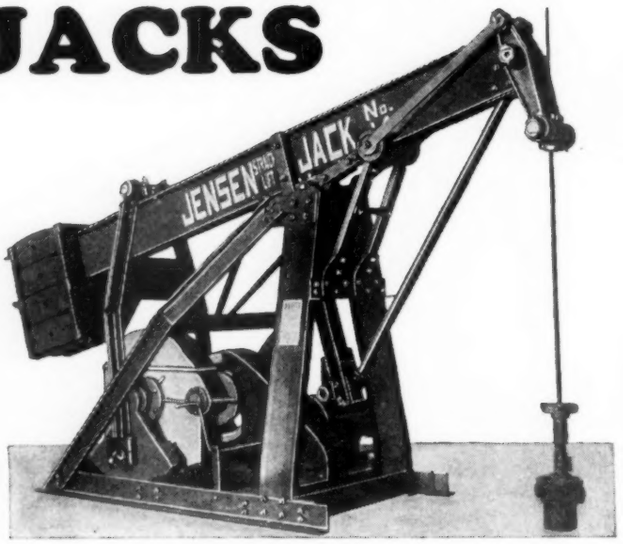

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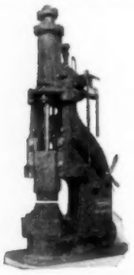

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2957 ft, tested sw 2961 ft, sd 2968 ft. Lenz et al's Johnson 2, sd arr set 700 ft 8-inch cas to shut off fresh water flow, td 4700 ft; Johnson 3, ne nw 24-16-26, sd 2850 ft. Bullock Oil Co.'s Hervey 1, 2-15-26, ta with junk in hole (ds frozen) td 2832 ft. East Texas O&G Co.'s Hervey 1, 2-15-26, ta 890 ft. Gusher Bend Oil Co.'s Adams 1, nw nw 24-14-26, 10-inch 115 ft, coring 2580 ft. O'Mara et al's Person 1, 31-15-25, lcn. Fitzwater et al's Beck 1, sw se 33-15-26, 10-inch 85 ft, sd. Salzer & McRae's Ross 1, ne nw 9-16-26, 10-inch 98 ft, sd 475 ft. J. D. McRae's Smith 1, nw se 28-15-26, dk.

OUACHITA COUNTY — Belmont et al's Dean 1, 16-15-17, top red beds 2765 ft, sd with junk in hole 2907 ft. Copenhaver et al's Elliott 1, se se 11-15-17, sd 2137 ft. Wesson & Bonner's Wesson 1, sw nw 22-15-19, 6⅝ cas 2083 ft, wo power to pump 300 ft fluid in hole, td 2169 ft. J. D. Reynolds' Grayson 1, 21-15-19, 10-inch 42 ft, cored Nacatosh 1502-14 ft, did not test, cored sand 2175-90 ft, cemtd 6-inch cas 2151 ft, td 2190 ft.

PIKE COUNTY—Henderson et al's Tilyou 1, 26-8-24, show heavy oil 567 ft, sr td 2335 ft. E. R. Henderson's Lee 1, sw se 31-8s-24w, dk.

POPE COUNTY—Ark. La. P. L. Co.'s McFadden & Brooks 2, ne nw 15-9-21, 13⅜ cas 1900 ft, tested 1 mil ft gas 3285 ft, 8⅝ cas 3415 ft, 8-inch 3451 ft, dr hard sand 3995 ft; Baird 1, se nw 11-7n-20w, dr sandy shale 725 ft.

SCOTT COUNTY — Heavener O&G Co.'s Reser 1, 36-4-26, sd 1536 ft. Ark. Valley Gas Co.'s Turner 1, se se 27-5n-30w, lcn. Waldron O&G Co.'s J. G. White 1, sw nw 17-3n-29w, junked first hole at 1815 ft, skidded 25 ft west sp new hole, cemt 10-inch 225 ft, dr 300 ft.

SEBASTIAN COUNTY—M. W. Greesom's Spear 1, 9-7-29w, sd after testing sw 2515 ft.

UNION COUNTY—Hickman et al's Hogg 1, 35-16-17, top Graves sand 2351 ft, top red beds 2779 ft, sd 3247 ft. Rice et al's Whatley 1, 7-17-15, sd 1520 ft. Marine Oil Co.'s W. B. Thompson B-2, se ne 10-18-13, 10-inch 317 ft, cored sand 3579-82 ft, cemtd 6⅞ O. D. cas 3577 ft, td 3582 ft; Thompson E-1, nw ne 10-18-13, rig; Thompson E-2, ne ne 10-18-13, lcn. Southern Prod. Co.'s Wingfield 1, se nw 16-19-15, 10-inch 103 ft, dr shale 2060 ft. Wilson & Chapman's Hadley 1, ne sw 3-18-13, 10-inch 102 ft, top Nacatosh sand 2300 ft, top Meekin sand 2350 ft, top red beds 2933 ft, dry 2535-51 ft, cored sand 3561-63 ft, 6⅝ cas 3539 ft, td 3563 ft. C. H. Murphy et al's Union Sawmill 1, nw sw 18-18-13, 10-inch cas 111 ft, top Nacatosh 2198 ft, arr ds test, td 2202 ft.

WASHINGTON COUNTY—Taylor et al's Runny 1, 1-13-29, sd 1702 ft. Lincoln Lease Holding Synd.'s Townsite 1, 30-15-32, ta 1500 ft. C. H. Willoughby's Jones 1, 34-16-30, sd 2150 ft. O'Hara & Shetterley's Boyd 1, 12-16-32, ta 850 ft. Delbert Graves' Cunningham 1, 14-15-32, sd in gray sand 602 ft.

VAN BUREN COUNTY — J. S. Martin's Scanland 1, 5-9-13, sd 50 ft.

YELL COUNTY—T. Luckett's Balcon 1, 36-7-12, sd while fsh cas, td 5710 ft.

PERMITS

(Continued from page 126)

and 450 ft from s line; 2, 150 ft from n and 161 ft from e line; 3, 450 ft from n and 161 ft from e line; 4, 161 ft from e and 150 ft from s line. Ward Oil Corp. & Elliott & Johnson, Wichita Falls, E. S. Thrash, 200, 1, Cardova sur, 450 ft from e and 150 ft from s line. Heep Oil Corp., et al, Houston, J. S. Bean, 14, 1, J. Lewis sur, 255 ft from n and 150 ft from w line. Tidal Oil Co., Fort Worth, L. Toliver, 15, 2, J. Ximinez sur, 150 ft from n and 197 ft from w line. Warner-Quinlan Co., Houston, S. S. Laird, 70, 1, I. Ruddle sur, 150 ft from s and w lines. G. G. McIntyre Drilling Co., Tyler, M. L. Thompson, 15, 1, F. Cardova sur, 150 ft from s and e lines. Westheimer & Daube, Ardmore, Okla., D.Peterson, 40, 1, I. Ruddle sur, 189 ft from e and 150 ft from s line. Gulf Prod. Co., Houston, R. N. Brightwell, 149, 1, R. E. Wynne sur, 330 ft from n and w lines. Woodley Pet. Co., Shreveport, J. Ladd, 55, 1, I. Ruddle sur, 200 ft from s and e

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lines. J. N. Peterson, 20, 1, I. Ruddle sur, 200 ft from s and e lines. C. L. Witherspoon, San Antonio, D. Bradford, 13, 1, J. Ximinez sur, 200 ft from n and 520 ft from w line. Republic Prod. Co. & Hart, Longview, T. E. Haynes, 11, 1, R. W. Smith sur, 150 ft from e and 166 ft from s line. Gulf Prod. Co., Fort Worth, M. E. ePterson, 205, 2, I. Ruddle sur, 150 ft from s and e lines. Marine Corp., Dallas, N. B. Bean, 50, 1, I. Rubble sur, 150 ft from s and w lines. Louisiana-Texas Oil Corp. & Lyons, Shreveport, M. Kennedy, 20, 1, D. Clark sur, 150 ft from s and w lines. W. B. Hamilton et al, Wichita Falls, Wm. Jobe, 109, 1, J. Ximinez sur, 150 ft from n and 450 ft from w line; 2, 150 ft from w and 200 ft from s line. Sinclair O&G Co., Fort Worth, D. Bradford, 35, 1, J. Ximinez sur, 150 ft from n and 160 ft from e line. W. W. Holland, 50, 2, J. Ximinez sur, 150 ft from e and 617 ft from s line; 3, 200 ft from s and e lines; 4, 558 ft from e and 200 ft from s line; 5, 200 ft from n and w lines; 6, 200 ft from e and 450 ft from n line; 1, 150 ft from s and 196 ft from w line.

REFUGIO COUNTY — United Prod. Co., Houston, J. J. O'Brien, 100, 10, Refugio sur, 150 ft from w and 428 ft from s line. W. J. Fox, A1, Hews & Brown sur, 1000 ft from s and 750 ft from e line. P. Powers, 49, 6, Refugio sur, center of blk 83. J. J. O'Brien, 100, 11, Refugio sur, se corner blk 83. R. Lambert, 2A, Refugio sur, 500 ft from e and 200 ft from s line. J. Mitchell, 150, 4, Refugio sur, 150 ft from n and e lines. P. Power, 49, 8, Refugio sur, center of blk 82. P. Power, 49, 3, Refugio sur, 200 ft from n and e lines. J. Mitchell, 150, 2, Refugio sur, 150 ft from n and w lines.

SHACKLEFORD COUNTY—H. & H. Drilling Co., Seminole, Okla., B. S. Walker, 60, 5, 381, TE&L sur, 150 ft from ne and nw lines of s½. J. L. Hart, Albany, B 40, 1, 1, Albany Twste sur, 60 ft from n and 110 ft from w line.

SAN PATRICIO COUNTY — United Prod. Co., Houston, J. B. Cage, 28, 3, M. M. Flores sur, 1017 ft from e and 167 ft from n line.

STARR COUNTY — Kelsey Bass, Willard O&G Co., Rio Grande City, Kelsey Bass, 10, 2, S 8, B 3, Por. 76, 1870 ft from w and 495 ft from n line.

STEPHENS COUNTY—Coulson & Spence et al, Mineral Wells, C. J. Winston, 40, 1, S 39, B 5, T&P sur, 340 ft from e and 330 ft from s line.

TYLER COUNTY—L. H. Wentz, San Antonio, Long Bell, 320, 1, J. Seale sur, 810 vs. from w and 150 ft from s line survey.

UPSHUR COUNTY—Tip D'Arman, Tyler, C. Cobb, 417, 1, M. Mann sur, 2095 ft from w and 450 ft from s line. Penn Oil Co., Dallas, O. B. Gage, 103, 1, J. B. B. Davenport sur, 1000 ft from w and 750 ft from s line.

VAN ZANDT COUNTY — Humble O&R Co., Houston, R. S. Blake, 201, 10, J. Walling sur, 1128 ft from w and 249 ft from s line. Pure Oil Co., Fort Worth, E. York, 40, 4, J. Walling sur, 660 ft from w and 250 ft from s line.

VICTORIA COUNTY — United Prod. Co., Houston, McFadden, B1, J. M. Valdez sur, nw corner.

WARD COUNTY—C. R. Snith, Grand Falls, Bocgher, 7, 1, Grand Falls sur, 150 ft from n and e lines of blk 14. S. J. Rixford et al, Grand Falls, J. H. Merritt, 6, 1, S 11, B 5, H&TC sur, 150 ft from s and w lines of blk 5.

WASHINGTON COUNTY — Sun Oil Co., Beaumont, H. Witt, 34, 6, J. F. Perry sur, 400 ft se of 5.

WILLIAMSON COUNTY — Fritz Fuchs, Taylor, L. W. Fuchs, 93, 1 ,W. Cartwright sur, 450 ft from w and 900 ft from s line.

YOUNG COUNTY — Oil News Publishing Co., Oklahoma City, Norton, 160, 1, 615, TE&L sur, 150 ft from s and 200 ft from e line. F. H. E. Oil Co. & Kimbell & Anderson, Fort Worth, N. Finch, 40, C8, 39, TE&L sur, 300 ft w of 1. W. R. Stafford, Graham, A. W. Kay, 66, 1, 1931, TE&L sur, 150 ft from s and e lines of ne¼. C. E. Beavers et al, Wichita Falls, Finch, 80, 1, 33, TE&L sur, 451 ft from n and 1716 ft from e line s½. McClung, Dawson et al, Cisco, J. J. Williams, 60, 1, 257, TE&L sur, 150 ft from s and 550 ft from e line. W. F. Hamilton, Wichita Falls, N. Finch, 40, 10, 40, TE&L sur, 450 ft from n and w lines of n½ sw¼. W. E. Bernhard, Wichita Falls, Balknap, 40, 1, S 8, TE&L sur, 1050 ft from n and 466 ft from e line. Texas Co., Wichita Falls, N. Finch, A, 6, 39, TE&L sur, 300 ft w of 5. W. F. Brazleton et al, Olney, E. R. Riggs, Graham, B. P. Larimore, 40, 17, 2247, TE&L sur, 1117 ft from s and 483 ft from w line sec; 18, 817 ft from s and 462 ft from w line of sec.

ZAPATA COUNTY—Grimm & Yakey, Agua Dulce, C. Bustamente, 193, 1, 33, Comitas sur, 5108 ft from sw and 650 ft from se line. A. R. McLennan, Laredo, Cuellar, 208, 2, S 358, P. H. Myers, Hebbronville, I. G. Trevino, 40, 277 sur, 1269 ft from w and 150 ft from s line. 1, S 412, B 24, 300 ft from w and 150 ft from s line.

A national sales organization, resources of one million dollars, established 25 years, having oil field supply offices and warehouses in Kansas City and Tulsa, wants additional lines of unquestionable merit, and of large volume, for distribution to oil producers and industrial plants in Kansas, Oklahoma and Texas.

Dun Credit Rating A+A1

Address: Box 1412, Care of
OIL WEEKLY Houston, Texas

Do you need photographs of your equipment in use in the field? We specialize in photographs of oil field equipment in the Gulf Coast territory.

Merchant-Thayer & Co.
415 Louisiana St. Preston 2526
HOUSTON, TEXAS
Successors to
CALVIN WHEAT COMMERCIAL STUDIO

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County Maps — Combination Maps
Descriptions and prices on application
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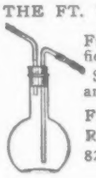
THE FT. WORTH LABORATORIES



Field Gas Testing. Analysis of oil field brines, gas minerals and oil. Sell Thermometers, Hydrometers and Laboratory Glassware.
F. B. Porter, B. S., Ch. E., Pres.
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Welding Wires

Superiority Proved by Service

Of equal importance to skill is the quality of Welding Wire. Good wire means perfect work, satisfied customers and lower shop costs. Premier Welding Wire is good wire—proved superior under all conditions of service—both electric and gas. Each bundle is shop tested to assure its uniform structure, free flowing and deeply penetrating qualities. Today, write us about your welding problems—no obligation.

1831 COMMEMORATING 100 YEARS of PROGRESS in WIRE MAKING 1931

AMERICAN STEEL & WIRE COMPANY

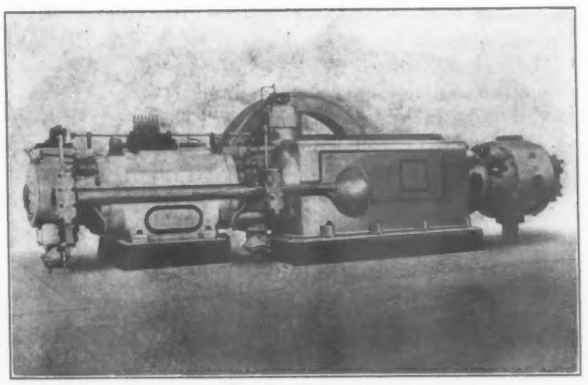
208 South La Salle Street, Chicago SUBSIDIARY OF UNITED STATES STEEL CORPORATION And All Principal Cities

Pacific Coast Distributors: Columbia Steel Company, Russ Building, San Francisco *Export Distributors:* United States Steel Products Company, New York

New Equipment for the Field

MACHINERY - TOOLS CATALOGS - BOOKS

▼ ▼ ▼



Cooper-Bessemer Type 40 Compressor

New Compressor Unit

The Cooper-Bessemer Corporation

The Cooper-Bessemer Corporation, Mt. Vernon, Ohio, announces the new type-40 compressor unit, which offers unusual compactness in its design. It delivers 400 brake horsepower, the manufacturers state, in about the same space usually required for 200 brake horsepower. The single-cylinder unit is rated 200 brake horsepower.

These twin units are of a low build and the design is such as to make all moving parts readily accessible. Adjustments may be made more simply, and the design has made replacement of parts easier.

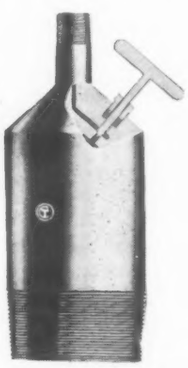
The company will furnish information on specifications and performance upon request.

Pressure Gauge Relief Nipple

Oil Center Tool Company

Oil Center Tool Company, 924 Adelle Street, Houston, announces production on the O-C-T pressure gauge relief nipple, designed to eliminate the pulsation of gauges installed on fluid lines or fluid handling equipment where pressure changes are rapid and considerable in range.

It is to eliminate expense of wear on gauges and to give a steady, accurate reading at all times, that the O-C-T pressure gauge relief nipple is offered.



O C T Pressure Relief Nipple

The unit is so constructed that pressure changes are recorded quickly, but with steady movement of indicator hands. The nipple works in any weather, and does not freeze in the coldest weather. A needle valve is built in to the top of the nipple to permit changing gauges without having to shut a gate valve between the fluid line and the nipple. The needle valve is tight under all pressures, to permit gauge changes without danger.

Electric Hoist

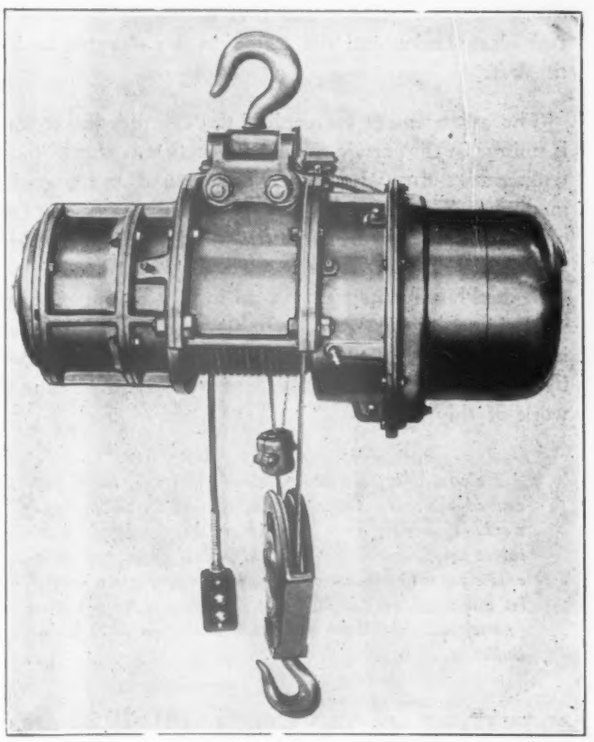
Wright Manufacturing Company

Wright Manufacturing Company, Bridgeport, Connecticut, has introduced a new Wright Type W electric hoist built for installations where high operating speeds are necessary. For the purpose of obtaining high speeds with efficient performance in operation, the motors are of a liberal size and designed especially for this type of hoist.

Materials used in the construction of this hoist are alloy steel shafts, drop-forged, heat-treated gears and pinions and Tru-Lay preformed cable.

The hoists are designed for different types of suspensions. They are furnished with either push button or pendant rope control. The motors and controls are fully enclosed, are dust and weather proof, so that the hoists are suitable for both indoor and outdoor installations.

The manufacturers will furnish complete details upon request.



Wright Electric Hoist

Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pennsylvania, has issued a 40-page publication devoted to telling of the company's engineering achievements in 1930. There is considerable information of interest to oil country engineers contained in this pictorial booklet, and various subjects pertaining to electrical power and latest electrical equipment are covered. The company will forward a copy to interested engineers upon request.

SELF-RELIANT and DEPENDABLE

Inconvenient location and scant water supply do not hinder this Diesel-powered pumping station

THIS station is typical of many in which existing conditions would make trouble for any power but good Diesel engines.

The pressure in the 12-in. line served varies from 450 lb. under minimum requirement up to 700 lb. at full capacity of 70,000 barrels per day, and each of the three pumps is driven by a 600-hp. McIntosh & Seymour Engine. Two of these engines meet all line demand, leaving the third as a spare. The fuel supply is stored in the two black tanks, and the water, in the elevated tank at the left.

The arrangement for cooling the cylinder jacket water is unique in that crude oil which remains at about 70-deg. temperature throughout the year is used as the cooling medium. The heated water is cooled in the heat exchangers shown in front of the building. These subject the entering water to the cooler temperature of the oil, with double advantage: *first*, an infallible supply of cold water is made constantly available, and, *second*, the heating of the oil in the exchangers reduces its viscosity, thereby reducing pipe line friction and considerably easing the work of the pumps.

McIntosh & Seymour Diesel Engines have fully earned their reputation for supremacy in oil pumping work. If any of your stations are handicapped by obsolete inefficient steam units, high fuel costs, bad water, excessive maintenance, inadequate or uncertain output, let our Engineers submit Diesel costs and performance guarantees. At least, write for McIntosh & Seymour Bulletins.

McINTOSH & SEYMOUR CORPORATION

Division of American Locomotive Company

Main Offices and Works: Auburn, N. Y.

New York City, 30 Church St. — Jacksonville, Fla., 412 Bisbee Bldg.

Houston, Texas, 2703 Esperson Bldg. — Kansas City, Mo., 1016 Baltimore Ave.

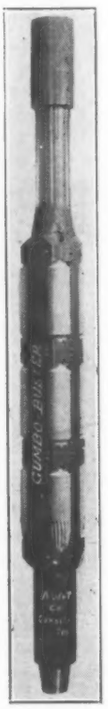
San Francisco, 514 Matson Bldg.

McINTOSH & SEYMOUR DIESEL ENGINES

Reamer and Guide

American Well & Prospecting Company

American Well & Prospecting Company, Corsicana, Texas, has recently brought out a new reamer which has only its lowest reamer rollers provided with cutting teeth on only a part of their length for the purpose of maintaining the full size of the hole. The upper rollers and the upper part of the lower rollers are smooth for the purpose of guiding the bit.



Gumbo Buster Reamer and Guide

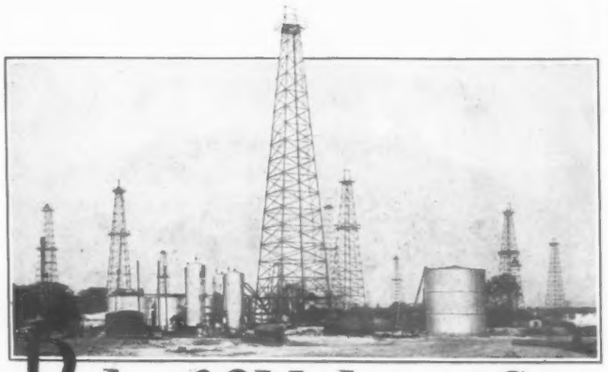
This combined reamer and guide will be manufactured in single, double and triple stage units, each stage of which will have a three-point contact with the side walls of the hole. The connections will be A. P. I. or to fit any bit. The materials for all parts have been carefully selected and treated under supervision on the basis of many years experience in this line of manufacture.

The manufacturers of this new reamer will be glad to furnish details on the design, construction and operation upon request to the home office at Corsicana.

National Supply Company, Toledo, is mailing out bulletins Nos. 120 and 121 giving the latest announcements on Superior stationary Diesel engines. The two to eight-cylinder Diesels of Superior Engine Company of Springfield, Ohio, are described in Bulletin 121, medium speed engines. A mechanical description of these engines is carried in this folder, with illustrations, both photographic and engineering drawings, used for simplifying the description. Bulletin No. 120 devotes 16 pages to picturing the working parts of these Diesels and to showing the power performance in charted curves. Copies of either or both of these bulletins may be had by writing National Supply Company or the Superior Engine Company at the respective addresses given above.

Natural Gas Equipment, Inc., Petroleum Securities Building, Los Angeles, has issued catalog number 101, a 60-page book in three colors, devoted to describing and picturing Wilgus equipment, including regulators, governors, valves and control equipment. Natural Gas Equipment, Inc., maintaining offices also at 1123 Harrison Street, San Francisco; 2375 Dorr Street, Toledo; and 415 Peoria Street, Tulsa, is the exclusive distributor of Wilgus Manufacturing Company equipment. This catalog, entitled "Pioneers in Natural Gas Equipment," gives the design, construction and operation of Wilgus equipment, and aside from giving photographs of the products installed on field jobs, graphically presents hook-ups in blue print layouts. A copy of this catalog is available upon request.

American Car and Foundry Company, 30 Church Street, New York, is mailing out a four-page folder describing the Milliken valves, used for handling gasoline, water, oil, steam, boiler blow-off, air, vacuum, gas and chemicals. These valves, which are furnished in cast iron, semi-steel, nicrofer, aluminum, bronze and other metals are briefly described in this bulletin, while full particulars are available upon application to the above address for the company's catalog on valves.



Pride of Oklahoma City

Washington Derricks were the pride of the deep drilling crews at Oklahoma City. Many of the Derricks were used before, being moved in from other fields as a result of preference born of confidence in in their proven ability.

At no time in the history of drilling has there been a better demonstration of stamina and dependable construction such as exhibited by the large number of Washington Derricks used in this field.

O'BRIEN STEEL CONSTRUCTION CO. INC. WASHINGTON DERRICKS RIG EQUIPMENT COMPANY

O'Brien Steel Construction Co., Inc.
Washington. Penna.

Western Representative:
RIG EQUIPMENT CO., 1224 N.W. 33rd St., Oklahoma City, Okla.

Powerful-Dependable

Beebe Bros. ALL STEEL HAND HOIST TRADE MARK REGISTERED SEATTLE, U.S.A.

A powerful piece of modern machinery which quickly finds its place as a necessary part of the oil producer's equipment. Light weight and easy set-up make it quickly available at any point of operation. Equally satisfactory for light or heavy loads. Positive internal brake (available on no other hoist). Let this sturdy little worker help you with your hoisting problems.

CAPACITY
5 Tons
Straight Line

WEIGHT
110 Lbs.

TWO SPEEDS
4-1 and 24-1

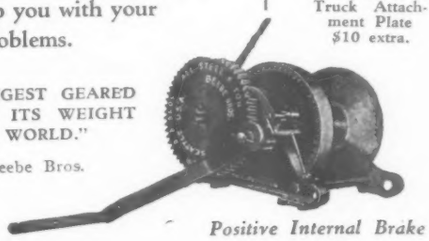
DIMENSIONS
16"x17"x13"
High

PRICE
$80

Steel Tail Hold Yoke $4 extra. Truck Attachment Plate $10 extra.

"THE STRONGEST GEARED POWER FOR ITS WEIGHT IN THE WORLD."

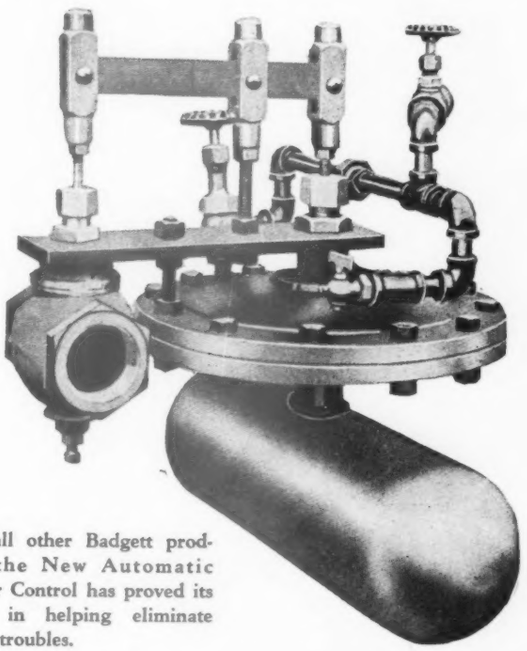
©1930 Beebe Bros.



SOLD BY *Positive Internal Brake*

THE NATIONAL SUPPLY COMPANIES

A NEW MEMBER OF THE BADGETT FAMILY



Like all other Badgett products, the New Automatic Blower Control has proved its value in helping eliminate boiler troubles.

If you are having trouble holding steam pressure, it will pay you to install this New Automatic Blower Control. This control works automatically in connection with burner flame, only operating when fire is hottest. The Badgett Automatic Blower Control will add at least 25% to the efficiency of the average boiler and, by supplying just the proper amount of draft at the proper time, serves to minimize flue leakage, reduces boiler troubles, and adds to fuel economy.

The Control works equally as well with hand-fired boilers as with gas regulated boilers. It works easily with any make of burner or regulator.

Conforming with our usual policy on all Badgett boiler equipment, we guarantee the control to save you money, to improve the efficiency of burner and boiler and to give you perfect satisfaction in every way. Order one or more of the new Automatic Blower Controls by telephone or wire today!

Southern Drilling Co., Oklahoma City
John Mabee, Tulsa
Lofland Bros., Tulsa
J. Henry, Duncan, Okla.
Summitt Drilling Co., Tulsa
G. J. Beard, Duncan, Okla.
Hubbard & Wofford, Tulsa
Herman Wagener, Oklahoma City
Byers Drilling Co., Oklahoma City
A & B Drilling Co., Oklahoma City
Capitol Drilling Co., Oklahoma City
Prince & Prince, Electra, Texas
Clark & Cowden, Duncan, Okla.
Independent Oil Co., Oklahoma City
G. E. Gilberth, Oklahoma City
Golden & Cochran, Wink, Texas
Haynes Drilling Co., Wink, Texas
Murphy & Graham, Seminole, Okla.
Steinberg & Yerkee, Seminole, Okla.
Fain-McGaha, Wichita Falls, Texas
Afleson & Clevinger, Seminole, Okla.
Winkler & McQueen, Duncan, Okla.
Reynold Drilling Co., Seminole, Okla.
Manahan Drilling Co., Seminole, Okla.
Herndon Drilling Co., Seminole, Okla.
Hartman & Hamilton, Seminole, Okla.

You are not obligating yourself when you write for details.

Sold through leading supply houses in the Mid-West and through the National Supply Co. in the State of California.

BADGETT STEAM LUBRICATOR COMPANY
CHICKASHA OKLAHOMA

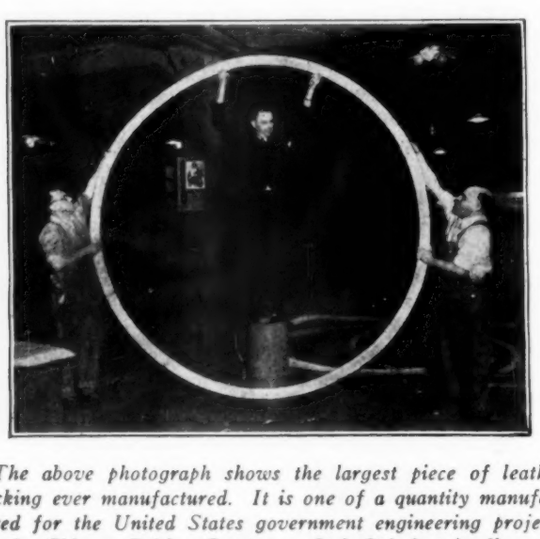
Manufacturer and Supply Dealer Notes

▼ ▼ ▼

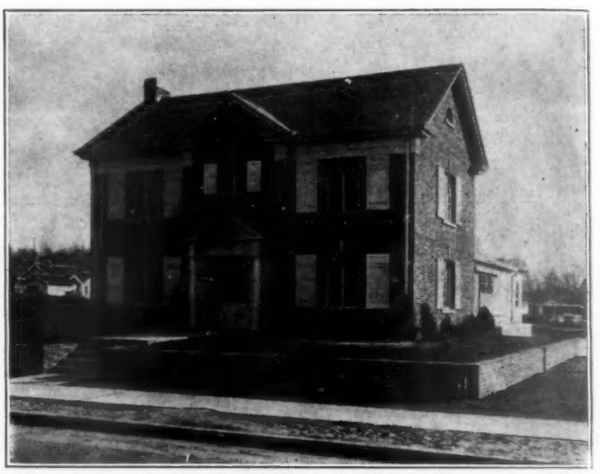
I. W. Alcorn, for the past four years an engineer with Independent Oil & Gas Company, Tulsa, has recently been named to head the engineering and research development department of Smith Separator Company, Tulsa. Alcorn, a member of the A. I. M. M. E. and the A. P. I., is a graduate of Massachusetts Institute of Technology and the Missouri School of Mines. Prior to this training he spent considerable of his time in the oil fields near Marietta, Ohio, and Robinson, Illinois, where his father, I. O. Alcorn, was among the early operators. Through its engineering department Smith Separator Company offers its service of a specialized nature to the industry.

I. W. Alcorn

Wickwire Spencer Sales Corporation announces the removal of its Tulsa office from the Philtower Building to 314 East Archer Street, where the company has about 10,000 square feet of warehouse space. E. L. Stevens, manager of sales, is in charge of this office.



The above photograph shows the largest piece of leather packing ever manufactured. It is one of a quantity manufactured for the United States government engineering projects by the Chicago Belting Company. It is 8½ feet in diameter, three-eighths of on inch thick and is made of chrome leather. It was made to a blue print.



New home of the Fluid Packed Pump Company (Mid-Continent) that has recently been completed in Oklahoma City. The location is 2 S. E. 29th street there and is on the main highway from town leading to the Oklahoma City field. Headquarters of the Fluid Packed Pump Company (Mid-Continent) formerly were in Tulsa.

Announcement is made of the appointment of D. P. Sands as district manager of the mechanical goods division of Thermoid Rubber Company of Trenton, New Jersey. Mr. Sands will cover the Mid-Continent territory including Kansas, Oklahoma, Texas, Louisiana, Arkansas and New Mexico and will maintain his offices in Tulsa. Thermoid Rubber Company manufactures belting, brake lining, hose and packing. Mr. Sands formerly was connected with the Hewitt Gutta Percha Rubber Corporation in the Mid-Continent territory.

D. P. Sands

Campbell Engineering Company, Short Hills, New Jersey, has issued a 16-page booklet giving a complete detailed description of the Campbell feed water regulator. The distinct principle of operation of this regulator is described in this booklet, which carries the latest improvements in design of the product. A complete list of parts with prices is included and also a complete list of control valves of various designs, all illustrated. A copy will be furnished upon request.

T. C. Ervin, superintendent of the boiler plant of the Lucy Manufacturing Corporation, is making a tour of the Mid-Continent and Gulf Coast oil fields.

Columbian Steel Tank Company of Kansas City, Missouri, announces that E. Van Cleave now is sales representative of the company in Tulsa with his business address as 1301 South St. Louis Avenue.

Important Announcement

ON AND AFTER MARCH 1ST, 1931, BAROID SALES COMPANY will take over the distribution of "AQUAGEL," the well-known and universally used trouble-proof colloidal drilling mud for use in both Rotary and Cable-Tool drilling. AQUAGEL was formerly distributed by the CALIFORNIA TALC COMPANY.

The combined personnel of both organizations will enable us to maintain an even higher standard of Quality and Service than heretofore, and we respectfully solicit a continuation of your valued patronage.

BAROID

The Extra-Heavy Colloidal Drilling Mud

BAROID is distributed in the States of New Mexico, Texas, Louisiana, Mississippi and Alabama by the PEDEN COMPANY of Houston, Texas and in all other States of the United States by the BAROID SALES COMPANY.

AQUAGEL

The Trouble-Proof Colloidal Drilling Mud

AQUAGEL is distributed in all oil fields of the world by the BAROID SALES COMPANY.

VISIT OUR BOOTH No. 5 AT THE OIL EQUIPMENT AND ENGINEERING EXPOSITION to be held in Los Angeles, March 16th to 22nd, inclusive.

Dots indicate points in the United States at which stocks of AQUAGEL and BAROID are available for prompt delivery—24-hour service.

BAROID SALES COMPANY

837 JACKSON STREET TELEPHONE FABER 0768 LOS ANGELES, CALIFORNIA

DISTRIBUTORS

WEST COAST: Oil Well Supply Co.—Coalinga, Goleta, Santa Barbara, Taft, Ventura, Venice. Carl Ingalls—Bakersfield. Speed & Service Trucking Co.—Santa Fe Springs, Venice. Crail Bros.—Santa Fe Springs, Venice.

NORTHWEST: Great Northern Tool & Supply Co.—Billings, Mont.

MID-CONTINENT: Bridgeport Machine Co.—*Kansas:* El Dorado, Hugoton, McPherson, Russell. *Texas:* Breckenridge, Pampa, Odessa, Ranger. *Oklahoma:* Oklahoma City, Seminole, Maud, Tulsa, Marshall. *New Mexico:* New Hobbs. *Ohio:* Marietta. *Sub Distributors:* Loving Lumber Co.—Arno, Texas. Foxworth-Galbraith Lumber Co.—Altman, Texas.

OTHER MID-CONTINENT DISTRIBUTORS: Enid Transfer & Storage Co.—Enid, Okla. Producers Lumber Co.—Lovell, Okla.

GULF COAST: Lucey Products Corp.—Houston and Pettus, Texas. Lake Charles and Shreveport, La. Tulsa and Oklahoma City, Okla. *Sub Distributors:* Beaumont Cement Sales Co.—Beaumont, Texas. Smith Supply Co.—Refugio, Texas.

EXPORT: Aquagel—Oil Well Supply Company, Los Angeles or New York City. Baroid—National Pigments and Chemical Company, Levee and Sidney Streets, St. Louis, Missouri.

A Sullivan Drilling Outfit was transported 700 miles into India, to carry on abandoned hole down to 6000 feet.

Sullivan Drills

now making 25-in. holes

starting with 21½-inch casing, Sullivan Drills are able to carry the hole two strings farther than other equipment. Substantial savings now available on deep holes.

Oil men all over the world look with keen interest at the big holes now being drilled with Sullivan Core Drills. Their ability to make 25-inch holes lends new significance to all the economies of core drilling.

One of these holes was started recently in New Zealand. It was spudded in with a 25-in. bit. Twenty-two days later 303 feet of 21½-in. casing was cemented through difficult agglomerates. Two months and nine days later, 16-in. casing was cemented at 1956 feet.

There are two important reasons why oil men would rather drill the wildcat with a Sullivan Drill.

(1) A hole drilled with a Sullivan can always be carried two strings of casing farther than the same hole drilled with other equipment. This is due to the ability of the Diamond Drill to work through smaller casing. (2) If the driller knows in advance, how far he is going to drill, he can start with a smaller hole by using a Sullivan Drill, greatly reducing the cost of the hole.

Core drilling on deep holes, and for structure testing is developing rapidly. If you do not have the latest information send for Booklets 85-H (Deep Tests and Wildcats), 85-K (Structure Testing).

SULLIVAN CORE DRILLS

Sullivan Machinery Company

713 WRIGLEY BLDG., CHICAGO

Agent for Oklahoma and Kansas, GEO. E. FAILING, Enid, Oklahoma

Squeaks From the Bull Wheel

▼ ▼ ▼

"Poor Sarah; she landed in jail for having her dress on backward."

"Why, they can't put her in jail for that!"

"Ah, yes, but they did; it was her evening dress."

One of the section crew of a western railroad chanced to pick up a dining car menu card, and seeing at the top "Table d'hote," turned to his pal and inquired:

"What does this 'ere mean, Joe?"

"Well," said Joe, "it's like this 'ere. Them swells in the diners have some soup, a bit of fish, a bit of this, a bit of that, and a bit of summat else, and call it 'table dottie.' We have 'table dottie,' only we mixes it all together and calls it stew."

"My idea of a good wife is one who can make good bread."

"My idea of a husband is one who can raise the dough in the hour of knead."

"Boy, you sho' has got a big mouff."

"Say, yaller boy, that ain't no keyhole in de front ob yo' face!"

She: "I think I'll take up horseback riding. It will increase my social standing."

He: "I don't know about the social part, but it will increase your standing."

Now, said the super salesman, "this instrument turns blue if the liquor is bad—green if it's good."

"Sorry, but I am color blind," apologized the prospect. "Got anything with a gong on it?"

He: "What a night, what a girl, what a moon—what a combination."

She: "Heavens, is that showing, too?"

Judge (sternly): Well, what's your excuse for speeding 60 miles an hour?

Victim: I had just heard that the ladies of my wife's church were giving a rummage sale, and I was hurrying home to save my other pair of trousers.

Judge: Case dismissed.

What is a pedestrian, daddy?

It is a person with a wife, daughter, two sons, and a car.

A lot of stories are going the rounds about how crowded the hotels are in East Texas, but this one takes the cake:

The story is told that two men got into a fight in a hotel lobby at Longview. One husky hit another on the chin as the climax of an argument around nine o'clock one evening. The hotel lobby was so crowded that the man who was hit didn't fall to the floor until five o'clock the next morning when the lobby cleared out a little!

Joseph: "How did you get your face scratched?"

Edward: "Jumping."

Joe: "What?"

Ed: "Yes. Jumping at conclusions on the date I had last night."

"For two cents I'd smash your face."

"Get away, you dirty professional."

Her: "Oh, don't make me yawn."

Him: "My name ain't Yohn, its Yim."

Young man (at bedside of rich uncle): "Is there no hope, doctor?"

Doctor: "I don't know. What were you hoping for?"

George: Why hasn't daddy got much hair?

Mother: Because he thinks a lot, dear.

George: Then why have you got so much, mother?

Mother (pause): Go on with your breakfast.

He: Yes, I changed schools.

She: Oh! I'm so glad. I never did like engineers, for they always leave blueprints on your neck.

Judge (after charging jury): Is there any question that anyone would like to ask before considering the evidence?

Jury: A couple of us would like to know if the defendant boiled the malt one or two hours, and how does he keep the yeast out?

Father: "What did you and Joe talk about last night, daughter, that kept you so quiet and interested in there in the dark?"

Daughter: "Oh, we talked about things, father, that young men and young women wouldn't have dreamed of discussing 50 years ago!"

Father: "What, for instance?"

Daughter: "Airplanes, and radios, and talkies, dad!"

APPLEMAN GUMBO BITS

When Your Old Bit Gets Flatter'n H - - - !

change to an **APPLEMAN**

Driller: **"Alright, derrick man, shut your pump down; we've got to come out o' th' hole again."**

Derrick Man: **"What th' H——! Three round trips in one night! We haven't been in th' hole forty-five minutes yet."**

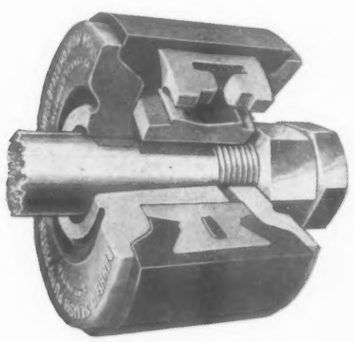
Driller: **"Yeah, I know, but that d—— bit's flatter'n H——!"**

Derrick Man: **"Well, take my advice and finish this hole with a couple of APPLEMANS."**

Use an APPLEMAN BIT on your next well.

B.K. APPLEMAN
BEAUMONT, TEXAS

Ramhead
SLUSH PUMP PISTONS

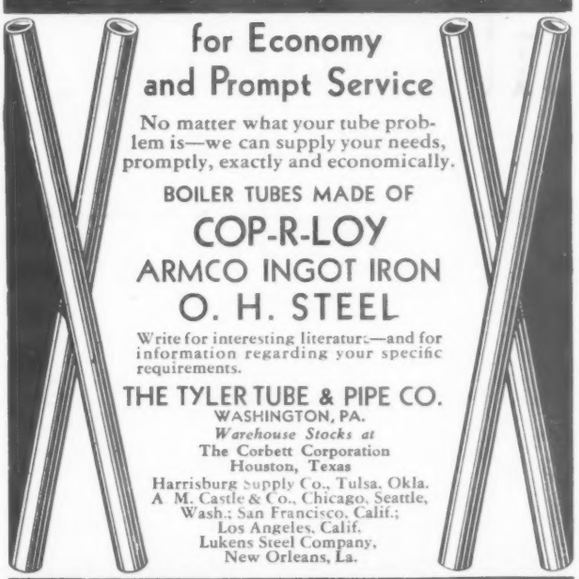


Ramheads Make a Good Pump Better

Their improved design with a minimum of constant friction on liner gives smooth regular pump service. There is less friction, less slippage and no metal contact with liners . . . consequently, longer life and increased efficiency. Ramhead Pistons are simple, foolproof and easy to install. Order a set and test them for yourself.

Alamo Iron Works
SAN ANTONIO TEXAS

TYLER



for Economy and Prompt Service

No matter what your tube problem is—we can supply your needs, promptly, exactly and economically.

BOILER TUBES MADE OF

COP-R-LOY
ARMCO INGOT IRON
O. H. STEEL

Write for interesting literature—and for information regarding your specific requirements.

THE TYLER TUBE & PIPE CO.
WASHINGTON, PA.
Warehouse Stocks at
The Corbett Corporation
Houston, Texas
Harrisburg Supply Co., Tulsa, Okla.
A. M. Castle & Co., Chicago, Seattle, Wash.; San Francisco, Calif.; Los Angeles, Calif.
Lukens Steel Company, New Orleans, La.

BOILER TUBES

GRANT

BALL TYPE AND SCREW TYPE CEMENT HEADS

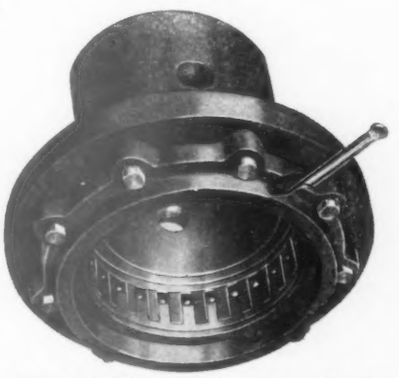
Obtainable with or without Plug Holders

Lightning Change Cement Heads

If you want to complete your cementing jobs "lightning fast" and with least danger if an emergency arises, use GRANT Cement Heads —noted throughout the oil world for their speed and dependability. A tight joint is obtainable in *30 seconds* because of a special locking device and a positive, leakproof connection can be had without loss of time to connect or disconnect the hose. No slips! Never sticks! High pressures increase the perfection of the positive seal attained with GRANT Heads. Also invaluable for use as circulation heads while washing in casing as they can be installed while pipe is in motion—practically eliminating stuck pipe.

The many additional advantages of GRANT Cement Heads are explained in latest literature. Also ask for literature describing GRANT Underreamers, Rotary Hose, Liner Pullers, Endurance Bits, Straight Hole Guides, Safety Automatic Pressure Release, etc.

A TIGHT JOINT IN 30 SECONDS



See our Exhibit at the Oil Equipment and Engineering Exposition

The GRANT Ball Locking Device

A feature of the Grant Ball Type Cement Head. Locks head on casing collar quick as a flash. Head easily drops onto casing collar but will not blow off, even under high pressure, due to wedging of steel balls against collar and tapered seats. Operation of the side handle lifts the balls and instantly frees the head for removal.

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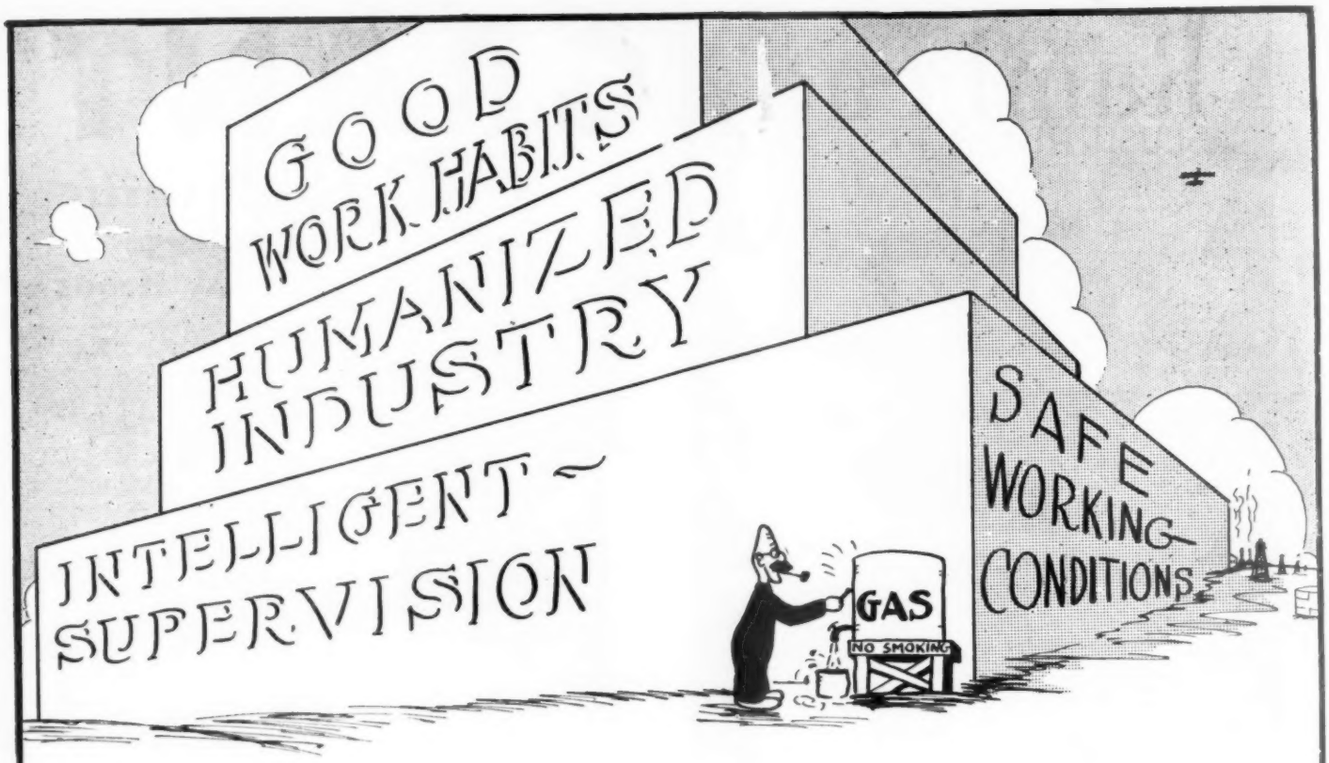
LINER PULLERS
CEMENT HEADS
ENDURANCE BITS
STRAIGHT HOLE GUIDES
SAFETY AUTOMATIC PUMP PRESSURE RELEASE

"USED WHERE PERFORMANCE COUNTS"



Even with a perfect background - Bonehead Stunts - still lead to accidents.

DON'T BE A BONEHEAD

WERNER

(This space contributed by a member of the Mid-Continent Oil and Gas Association)

INDEX TO ADVERTISERS

J. S. Abercrombie Company 33
Acme Fishing Tool Company .....
Ajax Iron Works 8-9
Alamo Iron Works 143
Allis Chalmers Manufacturing Company
Allsteel Products Manufacturing Co...133
Alten's Foundry & Machine Works ..
American Association of Petroleum Geologists .....
American Askania Corporation .....
American Brake Materials Corp. 4
American Hammered Piston Ring Co.
American Iron & Machine Works 27
American Meter Company 23
American Roller Bearing Co Second Cover
American Rolling Mill Company 14
American Steel & Wire Company 136
American Tank & Equipment Corp....
The American Well Works.....131
B. K. Appleman 142
Athey Truss Wheel Company.....
C. L. & W. W. Auer .....
Axelson Manufacturing Company 146

Baash-Ross Tool Company .....
Badgett Steam Lubricating Company..139
Baker Oil Tools, Incorporated..... 36
Barber-Greene Company .....
Baroid Sales Company.....141
The Barrett Company .....
The Bartlett Hayward Company ....
Beaumont Iron Works .....
Beebe Brothers.....139
Bessemer Gas Engine Company .....
Black, Sivalls & Bryson 7
Blackor Company .....
The Borden Company .....
Bradford Motor Works .....
Brauer Machine & Supply Company..
The Brewster Company .....
Bridgeport Machine Company .....
Ralph N. Brodie Company .....
Brown Well Control Company.....
T. A. Brown .....
Broderick & Bascom Rope Company...116
The Brewster Company 79
Buckeye Traction Ditcher Company.. 21
J. H. Bunnell & Company .....
Burns Tool Company .....
Butler Manufacturing Company..... 25
A. M. Byers Company 63
Byron Jackson Company .....

California Talc Company .....
Calmec Manufacturing Company 67
Cameron Iron Works .....
Caterpillar Tractor Company .....
Champion and Barber Inc. 57
Chain Belt Company 22
Chicago Bridge & Iron Works 12
Clark Brothers Company 80-81
Clark Machine Company .....
The Continental Supply Company ....
Fred E. Cooper Company.....
The Cooper-Bessemer Corporation...68-69
The Corbett Corporation .....
Corona Silica Company .....
Cyclone Fence Company .....

Darling Valve & Manufacturing Co...
E. M. Dart Manufacturing Company
Dayton Rubber Manufacturing Co.... 65
Diamond Drill Carbon Company.....
Doheny Stone Drill Company .....
Donovan Boiler Works..... 26
S. R. Dresser Manufacturing Company 32
E. I. Dupont de Nemours & Company

The Edward Valve & Mfg. Company..
E. H. Edwards Company .....
The Economy Pump & Oil Tool Co. .. 24
Elliott Core Drilling Company .....
Emsco Derrick & Equipment Company

Fort Worth Laboratories.....127
Franklin Valveless Engine Company ..
Frick-Reid Supply Corporation .....

Garland Wagon Company .....
Gaso Pump & Burner Manufacturing Company 3
Gates Rubber Company .....
General Electric Company 10

L. Hammer Company .....
Globe Oil Tools Company .....
H. P. Gott Manufacturing Company..132
Granger Indicator Company 20
Grant Oil Tool Company 143
Gray Tool Company .....
Greene, Tweed & Company .....
The Guiberson Corporation Fourth Cover
Gulf Coast Machine & Supply Co. ..
The Gulf Publishing Company 55
Gulf Refining Company 28
Gulf States Utilities Company .....

Halliburton Oil Well Cementing Co.. 35
Hardway & Cathey 135
Hart Brothers Machine Company ....
Haynes Stellite Company .....
Harrisburg Pipe & Pipe Bending Co.
Hazard Wire Rope Company .....
C. M. Heeter & Sons Company 135
Hercules Motor Corporation .....
Hercules Supply Company .....
Hercules Tool Company .....
Hewitt Gutta-Percha Rubber Corp. ...
Heydrick Mapping Company 135
Hinderliter Tool Company 29
Hooper Machine Works .....
Hirsch, Brown & Susman.....135
Hopper Machine Works, Inc. 59
The Charles N. Hough Manufacturing Company 133
Houston Engineers .....
Houston National Bank .....
Houston Oil Fields Material Co. ....
Houston Ready-Cut House Company..
Hughes Tool Company .....Front Cover
Humble Oil & Refining Company ....
Hyatt Roller Bearing Company .....

Ingersoll-Rand Company .....
The International Derrick & Equipment Company .....
International Harvester Company ....
Iverson Tool Company .....

Byron Jackson Company .....
Jarecki Manufacturing Company .....
Jenkins Brothers .....
Jensen Brothers Manufacturing Co. ..134
Jones & Laughlin Steel Corporation .....Third Cover

Kerotest Manufacturing Company 11
Kirk-Merrow Iron Works Company..

Landis Machine Company .....
Larkin Packer Company .....
The Layne & Bowler Company .....
Layne & Bowler, Inc. .....
A. Leschen & Sons Rope Company ...
The Lincoln Electric Company.....
The Linde Air Products Company.... 30
Link Belt Company .....
Litterst Commercial Photo Company...135
Lowell Wrench Company .....
Lucey Products Corporation .....

MacClatchie Manufacturing Company
Maintenance Engineering Corporation..
D. S. Mair Machinery Corporation... 134
McCollum Exploration Company 135
McIntosh & Seymour Corporation ...138
J. H. McEvoy & Company.....
Maloney Tank Manufacturing Co. .....
Martin-Decker Corporation 5
Merchant-Thayer & Company 135
Metric Metal Works 23
Mid-Continent Oil & Gas Association.144
Mills Alloys, Inc. .....
Miller Combination Bailer & Pump Co.
Miller Sand Pump Company .....
Lee C. Moore & Company 72-73
The Morris Company .....
J. P. Morris & DeLaVergne, Inc. ...
Multibestos Company 82
Murray Tool & Supply Company ....

National Foam System .....
National Supply Companies .....
National Tank Company .....
National Transit Pump & Machine Company 86-87
National Tube Company .....
Naylor Pipe Company 13

Oakite Products, Incorporated .....
O'Brien Steel Construction Company..139
Oklahoma Contracting Corporation...
Oil Center Tool Company .....
Oil Equipment & Engineering Exposition .....
Oil Industry Service Bureau .....
The Oil Well Improvements Company
Oil Well Supply Company 38
Oster Manufacturing Company .....

Page Steel & Wire Company.....
Parkersburg Machine Company .....
The Parkersburg Rig & Reel Company
Patterson-Ballagh Corporation .....
Peden Company .....
Pennsylvania Hotel .....
Petroleum Equipment Company 132
Petroleum Rectifying Company 61
Picadilly Hotel .....
Pittsburgh Screw & Bolt Corporation
Pittsburgh Steel Products Company..
Pratt & Whitney Company .....
Pyrene Manufacturing Company .....

J. P. Ratigan 118
Reading Iron Company .....
Regan Forge & Engineering Co. 19
Reed Roller Bit Company .....
Joseph Reid Gas Engine Company....
Republic Supply Company .....
Republic Steel Corporation .....
Robert E. Lee Hotel .....
Rollway Bearing Company .....

Second National Bank .....
J. E. Shaffer Company .....
Shaffer Tool Works 116
Shreveport Chamber of Commerce....
Sinclair Refining Company .....
SKF Industries, Inc. .....
A. O. Smith Corporation 76-77
Howard Smith Company .....
Smith Separator Company .....
South Chester Tube Company.....
Spang Chalfant & Company 31
Spang & Company .....
Southern Pacific Lines.....
Specialty Oil Tool Company 85
Spengler Tool Company .....
Sperry-Sun Well Surveying Company 34
Star Drilling Machine Company .....
Stoody Company .....
Jesse R. Stone 135
Sullivan Machinery Company 141
The Superheater Company .....

Technical Products, Inc. .....
Texas Blue Print & Supply Company
Texas Cyclone Fence Company .....
Texas Electric Steel Casting Company
Texas Electric Service Company .....
Thermoid Rubber Company .....
The Thrift Corporation .....
The Timken Roller Bearing Company 75
Tretolite Company 6
Trimont Manufacturing Company 18
Trumble Gas Trap Company 131
The Tyler Tube & Pipe Company....143

Union Carbide & Carbon Corporation
Union Wire Rope Company .....
United Gas Company .....

Vez Company .....
Vickers Machine Works 17

Westcott Valve Company .....
Walworth Company .....
Wickwire-Spencer Steel Company ....
Wico Electric Company .....
Williams Tool Corporation .....
Williamsport Wire Rope Company ... 16
J. H. Williams & Co. 15
Wilson Supply Company .....
W-K-M Company .....
Wright Manufacturing Company ....
Wyatt Metal & Boiler Works.....
T. T. Word Supply Company .....

Young Engine Corporation .....
Youngstown Sheet & Tube Company..

Every precaution has been taken to insure accuracy in listings in this Index to Advertisers, but last minute changes may result in omissions or erroneous listings for which we ask your indulgence. This index is for the convenience of readers and we do not assume liability for improper listings

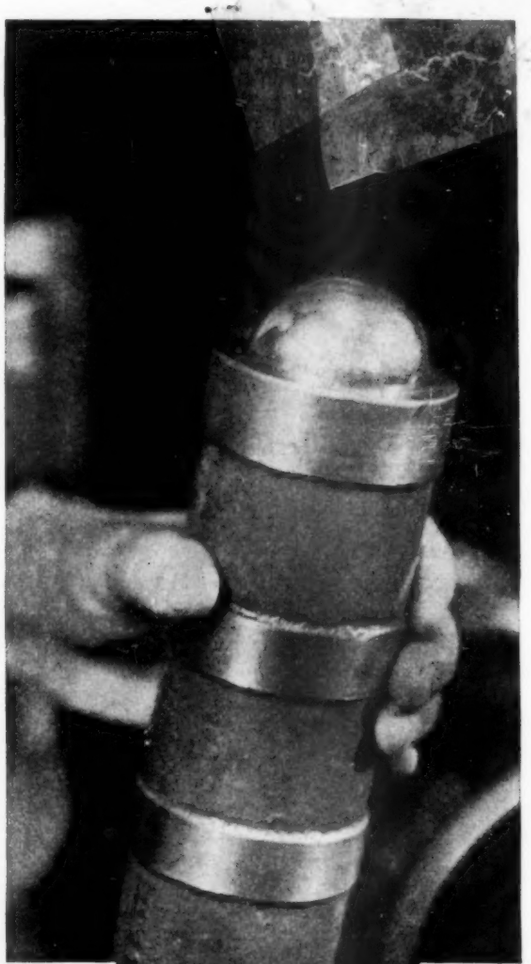
STRAIGHT FACTS

THE FIFTH AD OF THE SERIES AND THE SECOND DEVOTED TO AXELSON PUMP LINES

. . . behind the scenes

IN RESPONSE to trade demand created by the increasing interest in durable and economical liners, Axelson has developed a liner of chrome nickel alloy steel manufactured by the most modern and efficient methods. Two factors are paramount in all Axelson machining processes, accuracy and workmanship. They dominate every manufacturing operation. Every operation, every test is designed to produce a liner with interior and exterior surfaces perfectly concentric, a liner with end surfaces absolutely perpendicular to the bore, a liner of long life that wears uniformly. They are apparent in the operation of specially built machines that mill both ends of the liner, in others that rough bore four liners at a time and still others that turn simultaneously the five outside liner ribs. They are responsible for the minute attention given to finish and facing, finish boring and final honing. No method of finishing the inside of a cylinder is as accurate as the automatic expansion hone, an exclusive Axelson feature.

Any Axelson representative will be glad to give you the full manufacturing story on Axelson Liners.



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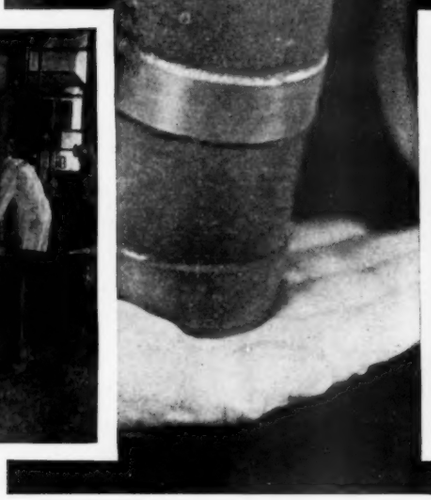
Straight line production . . . well-devised "follow through" of boring, reaming and finishing processes result in economical manufacture of Axelson Pump Liners.



A 2¼" valve ball may be placed in the top of a 2½" liner with a 2¼" I. D. and closed at the bottom by the hand. The ball is virtually supported by the air column thus formed for as long as a ten minute period.

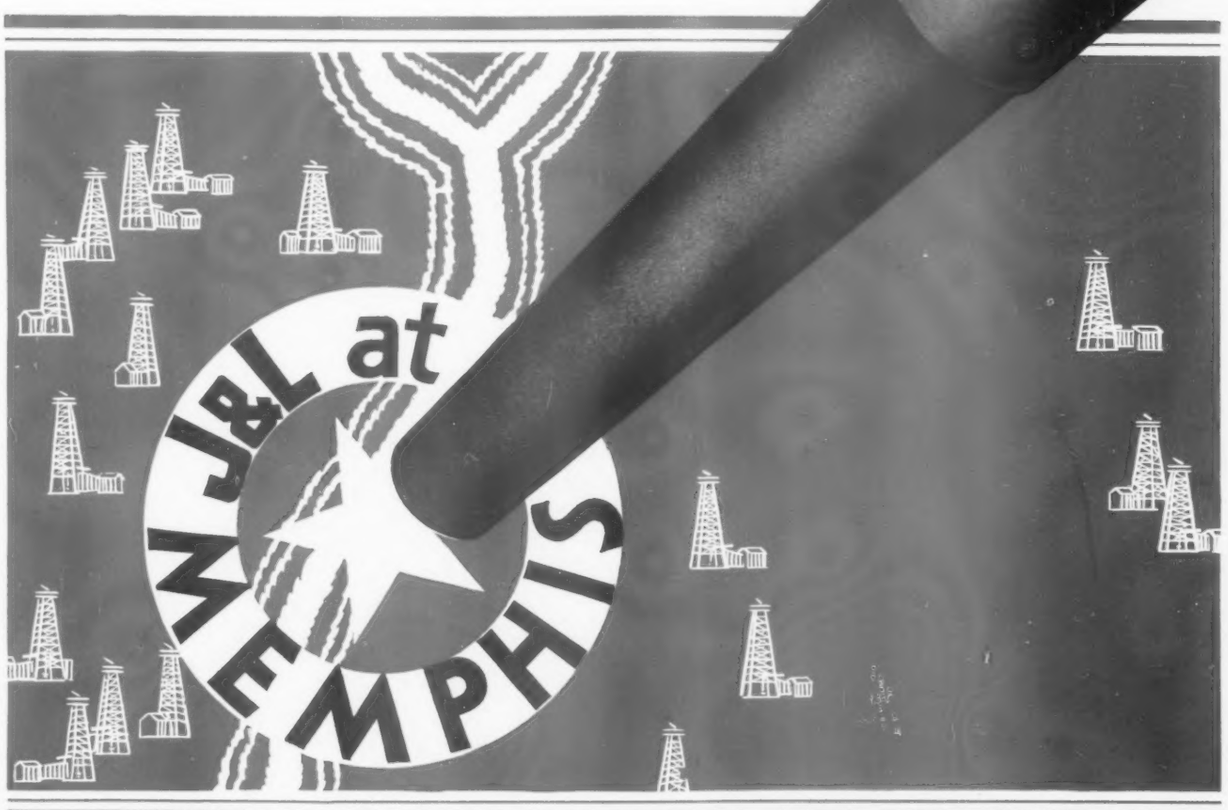
Liners are subjected to chemical and microscopic analyses both in the rough casting form as well as in the finished state.

AXELSON PUMP LINERS

SERVICE THAT BLANKETS the MID-CONTINENT, GULF COAST and TEXAS FIELDS

Intimate knowledge of the oil man's problems tells J & L the *kind* of pipe he needs. Intimate knowledge of steel problems tells J & L how to *make* pipe to conform to these requirements. Through the J & L Memphis warehouse, this pipe is available to the mid-continent, southwestern and Gulf Coast regions, with one- to three-day service to most fields, and five-day service to even the most distant points.

Railways and waterways have been coordinated to perfect J & L distribution and speed up its service. Ownership-control over all raw materials and processes of manufacture permits J & L to duplicate its products and results day after day, week after week—year after year. Experienced personnel fills your orders with intelligence. J & L service brings you the pipe you want, when . . . where . . . and as you want it.



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AMERICAN IRON AND STEEL WORKS

JONES & LAUGHLIN BUILDING, PITTSBURGH, PENNSYLVANIA

J&L STEEL

Manufacturers of Seamless and Welded Casing, Tubing, Drill Pipe and Line Pipe, and Welded Steam, Gas and Water Pipe in both Black and Galvanized.

Also makers of Bars, Shapes and Plates, Reinforcing Bars, Cold Finished Steel, Junior Beams, Steel Piling, Fabricated Structural Work, Steel Barges, Wire Products and Tin Mill Products.

CONTROL

MEANS AS MUCH TO A FLOWING WELL

AS IT DOES TO A

SKI TRAVELLER

Obtain it with the GUIBERSON CONTROL HEAD PACKER

Think what would happen to the ski traveller if he let those long, awkward looking boards go any way they chose. About every two minutes he would look like a picket fence, sticking up out of the snow.

Just as sad a picture is presented by the well that is allowed to flow haphazardly through the casing. Its strength is dissipated and it is soon threatened with extinction.

The Guiberson Control Head Packer confines the oil to the tubing, conserving the gas pressure and postponing the day when pumping must begin. Maximum production is assured and gravity of the oil is preserved, by maintaining the surface pressure in the well. The Guiberson Control Head Packer runs in against the heaviest flows.

TO PACK FLOWING WELLS

The Guiberson Tubing Oil Saver, set on top of the casing, confines the flow while the Control Head Packer is being run. Its rubbers permit passage of tubing collars and it can be opened wide to admit Packer or Tubing Catcher. Recommended for safety and economy.

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"Better Be Safe Than Sorry"

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BETTER BE SAFE THAN SORRY

Special Supplement to January 30, 1931 Issue of The OIL WEEKLY

1930 Index to The Oil Weekly

Specializing to the Producing and Pipe Line Branches of the Oil and Gas Industry

▼ ▼ ▼

SUBJECTS COVERED IN INDEX

	Page
Association Activities, Conventions, Expositions	2
Conservation—Cooperation	3
Curtailment—Proration	3
California	3
Kansas	4
Kentucky	4
New Mexico	4
Oklahoma	4
Texas	4
Engineering, Technical, Research	5
Engineering, Exploration	5
Engineering, Economic	5
Engineering, Drilling and Production	5
Engineering, Pipe Line and Transportation	7
Economics, Crude Markets, Statistics	7
Economic Situation	7
Market Reviews, Forecasts	8
Crude Oil Price Changes	8
Production and Field Statistics	9
Stocks and Storage	9
Features, Editorials, News	9
Editorials	9
Special Features	9
General News	9
Financial	10
Law and Legislation	10
Personnel and Safety	10
Field Development and Exploration	10
Foreign	10
Domestic	12
Arkansas	12
California	12
Colorado	13
Kansas	13
Kentucky	13
Louisiana	13
Michigan	14
Mississippi	14
Montana	14
Nebraska	14
New Mexico	14
Oklahoma	14
South Dakota	15
Texas	15
Washington	18
Wyoming	18
Maps	18
Foreign	18
Domestic	18
Pipe Lines and Transportation (Construction News)	18
General	18
Foreign	18
Domestic	18

1930 THE OIL WEEKLY INDEX 1930

Associations, Activities, Convention, Expositions

American Association of Petroleum Geologists

	Date	Page
A.A.P.G. to Meet in New Orleans in March	Jan. 3	70
Sidney Powers New President of Geologists Association. *By Kent Kidley*	March 28	44
Pacific Section, A.A.P.G. Has Record Attendance At Meeting	Nov. 14	85

American Gas Association

Arrange for Large Attendance at Gas Meeting at New Orleans	Apr. 4	66
Gas Men Talk Wider Markets at New Orleans. *By H. J. Struth*	May 9	39

American Institute of Mining and Metallurgical Engineers

Engineers See Controlled Operation as Road to Stabilization	Feb. 28	33
A.I.M.M.E. Meeting in Los Angeles Has Good Program	Oct. 3	168
A.I.M.M.E. Meeting Draws Large, Interested Attendance	Oct. 10	66
A.I.M.M.E. Fall Meeting Attracts Large Attendance	Oct. 24	79

American Petroleum Institute

Production Division Meets at Pittsburgh in April	Feb. 7	64
Tonkawa Field Men Hear Talk on Gasoline Field Operations	Feb. 28	68
Drumright A.P.I. Chapter Discusses Treating of Oil	Mar. 28	38
Division of Production in Session at Midland	Apr. 11	29
Formation of Additional A.P.I. Production Chapters Planned. *By H. H. King*	Apr. 18	30
Division of Production Central Committee Named	Apr. 18	74
Technical Subjects on A.P.I. Mid-Continent Program	May 16	65
Engineers Consider Economic Ills at Tulsa Meeting. *By Spencer Robinson*	May 30	22
Chapter Hears Discussion of Oklahoma City Drilling	May 30	58
Production Big Division of A.P.I.	June 20	61
Drumright Chapter A.P.I. Discusses Electric Power	June 27	65
Waste Committee Meets at Dallas	June 27	63
Institute Directors Meet at Tulsa October 3	July 11	68
A.P.I. Committee on Waste Disposal Meets in Los Angeles	Aug. 1	222
Program of Southwestern A.P.I. Production Division Arranged	Aug. 8	50
A.P.I. Southwest District Meeting at Galveston	Sept. 5	64
Southwest A.P.I. Group Has Instructive Conference. *By Jack Logan*	Sept. 12	67
Burbank Production Chapter Holds Meeting	Sept. 26	62
Move A.P.I. West Coast Office to Los Angeles	Oct. 17	76
Name Division of Production on Fire	Oct. 31	57
Busy Sessions in Prospect When A.P.I. Members Meet in Chicago	Oct. 31	24
Will Discuss Conservation, Proration, Unitization	Oct. 31	57
Plan Mid-Year Meetings for Three Institute Divisions	Nov. 7	112
Form San Joaquin Valley Chapter of A.P.I. Pacific Coast Division	Nov. 7	123
Symposium of Subjects Before A.P.I. Department of Production at Chicago	Nov. 14	25-C
Institute Speakers Point Way to Better Times. *By Spencer W. Robinson*	Nov. 14	25
Reeser Again Re-Elected President; Penn Vice-President for Production	Nov. 21	27
Analysis of Corrosion Cost Recommended in Report	Nov. 21	28
Definite Action on Tariff Problem Side-Stepped	Nov. 21	29
A.P.I. Votes to Continue Work on Petroleum Research	Nov. 21	29
A.P.I. Meets in Chicago in 1931, Plan Mid-Year Meetings	Nov. 21	29
Relation of Earth Temperature and Oil Accumulation Studied	Nov. 21	76

American Society of Mechanical Engineers

A.S.M.E. Group Visits Oil Fields in Oklahoma	March 28	41
A.S.M.E. Program for Tulsa Meeting in October Arranged	Sept. 12	120

California Industrial First Aid Meet

	Date	Page
Industrial Safety Meet at San Francisco	Apr. 4	

California Oil & Gas Association

California Supply Men Plan Chamber Division	March 14	
California Oil & Gas Association Adds Department	Sept. 26	
California Association Names Officers for 1931	Dec. 26	

California Oil Scouts Association

California Oil Scouts Form Association	May 30	

Houston Geological Society

Funds for Petroleum Library Sought in Houston	June 13	
Houston Geological Society's New Officers	Nov. 21	

Joseph A. Holmes Safety Association

International First Aid Meet	March 28	

Independent Petroleum Association of America

Tulsa Meeting Proves Tariff Advocates Mean Business. *By Grady Triplett*	Feb. 7	
Projected Production Curve Used to Show Tariff is Needed. *By James H. Gardner*	Feb. 7	
Tariff Advocates Invade Capitol; Hoover Receives Committee. *By Warren Baker*	Feb. 7	
Committee of Fifteen Calls on President	Feb. 7	
Malloy Discusses Oil Tariff	Feb. 7	
Tariff Advocates Pleased With Progress Made. *By Warren Baker*	Feb. 14	
Statement Presented Congress to Support Tariff Plea. *By Wirt Franklin*	Feb. 14	
Tariff Advocates to Hold Series of Meetings	Feb. 14	
Civic Organizations Indorse Oil Tariff Move	Feb. 21	
Tariff Proponents Planning Washington Demonstration	Feb. 28	
Tariff Proposal Gaining Strength; Sheppard Out With Statement	Feb. 28	
Oil Tariff Beaten in Senate Vote; Franklin Before Committee	March 7	
Tariff Advocates Criticize Fact-Finding Committee of Oil Board	March 21	
Oil Tariff Finally Defeated by Close Vote in Senate	March 28	
Independent Association to Continue Fight for Tariff on Petroleum Imports. *By H. H. King*	April 25	
Independents to Renew Fight for Tariff on Crude	Sept. 26	
Oklahoma Independents Direct Guns at Shell. *By Grady Triplett*	Oct. 3	
I. P. A. A. to Renew Fight for Tariff on Gasoline and Crude	Oct. 17	
Independents Seek Better Understanding. *By H. J. Struth*	Oct. 31	
I. P. A. A. Forms Montana Division Organization	Oct. 31	
Tariff Committee Seeking Data on Crude Costs. *By Clarence L. Linz*	Nov. 7	
Texas Independents Name Technical Advisory Committee	Nov. 28	

Institute of Petroleum Technologists (London)

The Institute of Petroleum Technologists	Aug. 1	

International Petroleum Exposition (Tulsa)

Exposition Board Named at Tulsa Meeting	Jan. 17	
Tulsa Exposition Space Being Reserved	Apr. 4	
Exposition Committee Adds New Building	May 30	
Tulsa Exposition Space Largely Sold	July 4	
Committee Plans Exhibits for Tulsa Exposition in Fall	Aug. 1	
Sixth Annual First Aid Meet to be Held During Exposition	Aug. 8	
Foreign Countries to Take Part in Tulsa Exposition	Aug. 8	
Finishing Touches Put to Exposition Grounds. *By Grady Triplett*	Sept. 19	
Pre-Exposition Meetings Set for October 3 and 4	Sept. 26	
Exposition Opening Day Program Now Arranged	Sept. 26	
Exposition Opening Brings Many Interests to Tulsa	Oct. 3	
Events of Interest at the Tulsa Exposition	Oct. 17	

Mid-Continent Oil & Gas Association

	Date	Page
Tulsa Meeting Takes First Step Toward General Unitization	Jan. 31	192
Mid-Continent Association Favors Oil Tariff. *By H. H. King*	Dec. 12	25
McGrew Heads Louisiana-Arkansas Division of Association	Dec. 12	26

Mid-Continent Oil Scouts and Land Men's Association

Mid-Continent Scouts Hear Opposing Economic Theories	May 30	58

National Safety Council

Important Conference Features Annual Safety Congress Meet	Sept. 26	52

North Texas Oil & Gas Association

North Texas Operators Forming New Association	Jan. 31	194

Oil Equipment and Engineering Exposition (California)

Prospects Bright for Los Angeles Oil Equipment Show	Jan. 24	68
Engineers to Discuss Field Problems at Exposition	Feb. 21	92
Technical and Mechanical Progress Featured at First California Engineering Exposition	Mar. 14	117
California Oil Engineering New Equipment Pages	Mar. 14	120.177
Los Angeles Exposition Success Points to Annual Affair. *By Brad Mills*	Mar. 28	42
California Exposition Buildings Ready for Second Meeting	Oct. 3	212

Oil Map Revision Association

Los Angeles Map Men Have Information Exchange	Feb. 7	61

Oklahoma Operators Mass Meeting

Oklahoma Producers Protest Price Cut; Advance Tariff Issue	Jan. 24	37
Oklahoma Operators' Protest Presented to President	Dec. 19	34

Rocky Mountain Oil & Gas Association, Montana Division

Joint Meeting of Alberta-Montana Oil Men Scheduled December 12	Dec. 12	74
Montana Oil Men Seek Tariff on Oil and Gas	Dec. 19	80
Joint Rocky Mountain Meeting Has Constructive Meeting	Dec.26	66

Shreveport Geological Society

Shreveport Geologists Make Field Trip	June 27	65

Western Petroleum Refiners Association

Crawford Heads Western Refiners Association	Mar. 21	98

Wichita Falls Independent Operators

Wichita Falls Operators Oppose Crude Price Reductions	Jan. 24	60

Conservation—Cooperation

California Gas Waste Legislation Advanced During Last Year	Jan. 31	63
Necessity Forces Effective Conservation in California. *By Brad Mills*	Jan. 31	117
Gas Law Constitutionality Vigorously Attacked	Feb. 14	74
California Oil Leaders Take Public Into Confidence. *By Brad Mills*	Feb. 21	28
Injunction to Stop Gas Waste Significant Development	Mar. 28	70
California Gas Waste Injunction Not Fully Effective. *By Brad Mills*	Apr. 4	35
Wilshire Group Writ Restrains Gas Curtailment Order. *By Brad Mills*	Apr. 18	35
Government's Conservation Program Hits Court Snag	Apr. 18	72
Reveal Navy Department's Plans to Safeguard U. S. Oil Reserves	May 16	77
Oklahoma Supreme Court Upholds Conservation Law	Oct. 17	51
Julian Court Decision is Triumph for Conservation	Oct. 24	51
California Gas Law Ruling to be Handed Down October 31	Oct. 24	80
Commission Orders State-Wide Investigation of Gas Waste	Nov. 7	111
Gas Conservation Offered by Ames as Cure of Industry Ills	Nov. 21	25
State Loses in Long Beach Gas Waste Injunction Suit.	June 27	67
California Gas Conservation Law Held Constitutional.	Nov. 14	84
Commission Inquires Into Gas Waste at Pettus	Nov. 21	73
Convict Two of Improper Well Abandonments	Nov. 28	70
Appeal Court Upholds Hoover's Conservation Policy	Dec. 5	26
Two High Court Decisions Uphold Gas Waste Law	Dec. 12	27
Legislation to Conserve Oil and Gas Urged by Adams.	Dec. 19	90

Curtailment—Proration

General

Crude Price Revisions Expected to Stimulate Curtailment	Jan. 24	41
Haines Says Production Control Necessary	Feb. 7	61
Government Policy Restricted Development During 1929.	Feb. 14	76
Conservation Board Wants Output of Gasoline Curtailed	Mar. 7	45
Refiners Favor Curtailment Sponsored by Oil Board	Mar. 14	59
Sunday Shut-Down Move Gains Popularity in Mid-Continent	Mar. 21	46
Committee Sets 1930 Crude Quota at 943 Million Barrels. *By Clarence L. Linz*	Apr. 18	21
Price Cut Follows Uncertainty in Proration	May 23	63
Government Figures Show Need for Refinery Curtailment	July 18	50
Refiners Joining Curtailment Move; Crude Output Down	July 18	53
August Drilling Reflects General Curtailment. *By H. J. Struth*	Sept. 12	37
Continuation of Curtailment Had Firming Effect	Sept. 26	53
Oklahoma Proration to be Tested by Federal Court	Sept. 26	70
Proration Enforcement Held Constitutional by Court	Oct. 3	184
Texas Commission Intimates Court Action Possible	Oct. 31	23
Need for Drastic Curtailment of Refinery Output. *By Grady Triplett*	Nov. 14	23
Limiting Production is Not Restraint of Trade	Nov. 14	25b
Lessened Oil Demand Makes Curtailment Imperative.	Nov. 14	25e
More Drastic Curtailment Follows Lower Prices	Nov. 14	59
Oklahoma and Texas Lead Production Decline	Nov. 14	62
Refinery Curtailment Forcing Lower Crude Output	Dec. 12	51
New Law Suggested to Control Oil Production	Dec. 5	89

CALIFORNIA

California Not Satisfied With Curtailment	Jan. 3	64
California Curtailment Approaches Critical Period	Jan. 24	64
Wilbur Working With Operators on Kettleman Hills Curtailment	Jan. 31	207
Wilbur Says Kettleman Hills Control Essential to Industry's Stability	Jan. 31	207
Vigilance Required to Hold California to Proration. *By Brad Mills*	Feb. 7	21
Outline Plan to Limit California Production	Feb. 7	61
California Operators Plan Cut to 600,000 Barrels. *By Brad Mills*	Feb. 14	29
Organize Both Sides in Kettleman on Curtailment	Feb. 14	74
California Committee Sets State-Wide Proration. *By Brad Mills*	Feb. 28	25
First Results Point to Success of California Curtailment.	Mar. 7	70
California Curtailment Progress Considered Satisfactory.	Mar. 14	239
Special Committee Plans Balanced Program for California. *By Brad Mills*	May 9	23
Minority Opposition Endangers California Curtailment. *By Brad Mills*	May 16	29
Kettleman Hills Being Held Under Curtailment	May 16	78
Ventura Little Affected by Curtailment Program	May 16	78
California Curtailment Unchanged After Crude Price Cut	May 30	65
Curtailment Shows Improvement; Gasoline Market Heavier	June 13	67
Curtailment Proves No Cure-All for California's Ills. *By Brad Mills*	July 4	31
California Above Allowable; Curtailment to Continue. *By Brad Mills*	July 25	31
California Faces Another Year of Curtailment. *By Brad Mills*	Aug. 15	34
New Methods of Potentials May Affect California Drilling	Aug. 22	75
California's Curtailment Has Proven Practical and Necessary	Aug. 29	80
Plan Further Reduction of Production	Sept. 5	67
California May Agree on Allowable of 575,000 Barrels Daily	Sept. 12	93
California Rated Allowable Cut to 540,000 Barrels. *By Brad Mills*	Sept. 26	25
California Continues Effort to Reduce Production to 575,000 Barrels	Oct. 10	184
The Control of California Oil Curtailment. *By Robert E. Allen*	Oct. 17	21
Playa del Rey to be Prorated	Nov. 14	62
California Starts Second Year of Conservation Auspiciously	Nov. 21	88

	Date	Page
Consider Plan to Cut California Allowable Further	Nov. 2	69
California Curtailment Again Reaches Critical Stage. *By Brad Mills*	Dec. 5	23
Try Lower Allowable Figure in Effort to Lower California Output	Dec. 12	52
Elwood Curtailment Failure Weakens Movement	Dec. 19	66
Try Lower Allowable Figure in Effort to Lower California Output	Dec. 12	52
Elwood Curtailment Failure Weakens Movement	Dec. 19	66
California's Allowable Cut to 500,000 Barrels	Dec. 26	23

KANSAS

Drilling in the Shurr Pool Restricted Under Operator's Agreement	Feb. 21	53
Change Prorated Output of Two Kansas Pools	May 9	53
Proration of Kansas Production Getting Further Attention	July 18	69
Prairie Applies Oklahoma Plan of Proration to Kansas Fields	Nov. 14	61
Phillips to Prorate Runs From Kansas on Marginal Basis	Nov. 21	74
Voshell Pool Operators Vote to Extend Proration Through January	Dec. 19	55
Government Agencies Studying Eastern Kansas' Plight	Dec. 26	47

KENTUCKY

Western Kentucky Shutdown Effective Another 30 Days	Mar. 7	62

NEW MEXICO

Hobbs Proration Plans Progress With Opposition Removed *By H. H. King*	July 4	35
Hobbs Potential Increased as Proration Plans Progress	July 11	74
Operators and Officials Agree on Hobbs Curtailment *By H. H. King*	July 18	45
Hobbs Output to be Cut to 31,715 Barrels	Oct. 24	68
Proration Figures, Hobbs Field, New Mexico	Oct. 24	71
Hobbs Allowable is Reduced to 31,300 Barrels Daily	Nov. 7	115
Continuation of Proration at Hobbs is Approved	Dec. 26	60

OKLAHOMA

Curtailment Reduces Oklahoma City Production to 70,000 Barrels	Jan. 31	191
Oklahoma Meetings to Consider Proration Extension	March 14	60
Oklahoma Proration Extended; Seek Means of Price Raise	March 21	63
Oklahoma Curtailment Order Extended from April 1	April 4	38
Four Prospective Oklahoma Pools Placed Under Proration	May 23	58
Committee to Co-operate on Proration in Oklahoma	June 13	53
Oklahoma Proration Committees Plan Third Quarter Curtailment *By Floyd Swindell*	June 20	37
Oklahoma Operators Initiate Proration Order	July 4	34
Further Curtailment in Oklahoma Asked of Commission *By Grady Triplett*	July 18	38
Few Protests Filed to Prairie Action in Curtailing Runs	July 18	64
Oklahoma Limit 550,000 Barrels Official	July 25	73
Proration Success Outstanding During Past Year *By Floyd Swindell*	Aug. 1	134
Southern Oklahoma Fields on Proration Basis Since August 10	Aug. 15	51
Oklahoma City Producers Threaten State Proration Program	Aug. 22	59
Commission Authority Due for Court Test at Oklahoma City	Aug. 22	68
Oklahoma Production Set at 550,000 Barrels Daily *By Grady Triplett*	Aug. 29	37
Oklahoma City Proration is Delayed Week by Court	Sept. 5	57
Supreme Court Delays Decision in Proration Suit	Sept. 12	83
Await Decision in Oklahoma City Proration Row	Sept. 19	78
Hearing of Contempt Citations Again Postponed to October 6	Sept. 26	56
Cement Pool Allowable Cut to 40 Per Cent	Sept. 26	67
Proration Plan Gives Oklahoma City 130,000 Barrels Daily *By Grady Triplett*	Oct. 10	53
Oklahoma Proration Meets Opposition at Hearing	Oct. 17	51
Oklahoma Commission Further Restricts Proration	Nov. 7	103
Richards Heads Oklahoma Proration Committee	Nov. 7	103
Suggested Potential and Allowable Production of Crude Oil—State of Oklahoma, October 31 to December 31, 1930	Nov. 7	104
Issues New Proration Order for Oklahoma City Field	Nov. 14	64
Commission Appoints Collins Umpire of Proration	Nov. 21	76
Oklahoma and Kansas Proration Meets Postponed to December	Nov. 28	75
Prairie Withdrawal Calls for New Proration in Oklahoma	Dec. 5	63
Oklahoma Proration Opponents May Take Question Before Legislature	Dec. 12	53
Proration Violation Boosts Oklahoma City Output	Dec. 12	67
Producers, Purchasers, Pipe Line Men to Meet	Dec. 12	70
Oklahoma Organizing Opposition to Proration Appeal *By Grady Triplett*	Dec. 19	27
Oklahoma Allowable Cut to 465,000 Barrels	Dec. 26	55

TEXAS

Curtailment of Crude Runs Halts Wilbarger Field Work	Jan. 17	55
Texas Operators Propose Restoring Price by Curtailment	Jan. 24	38
Texas Committee Agrees on Drastic Production Cut	Jan. 31	46
Texas Curtailment Committee Expected to Recommend 100,000 Barrel Cut *By H. J. Struth*	Feb. 7	35
Proration of Panhandle Fields Extended	Feb. 7	55
Texas Committee Makes Progress in Curtailment Plan *By H. H. King*	Feb. 14	34
Texas Curtailment Committee Seeks Government Aid	Feb. 21	29
Co-operation Lacking in Texas Curtailment Efforts *By H. H. King*	Feb. 28	27
Extend Proration Term in Howard-Glasscock	Feb. 28	34
Panhandle Operators Approve Plan of Proration Extension	March 7	65
Proration and Its Effects in the Yates Pool *By R. W. Richmond*	March 14	58
Texas Company Abandons Panhandle Proration	March 14	217
Panhandle Proration Proposed Provokes Controversy	March 21	65
Operators Divided in Hearing on Panhandle Proration	March 28	57
Darst Creek Output Continues Above Allowance	March 28	64
Commission Holds Hearing on Darst Creek Drilling	March 28	69
Texas Operators Renew Efforts to Curb Crude Production	April 4	38
Yates Proration Meeting Called; May Loosen 20,000 Barrels.	May 9	55
Winkler Proration Extended Another Six Months	May 9	56
Darst Creek Allowable Now 23,829 Barrels Daily	May 9	60
Darst Creek Operators Adhere to Proration Quotas	May 16	85
Committee Seeks Data on Texas Crude Requirements	June 20	54
West Texas Proration Revision Up for Consideration	June 20	58
Young County Operators Agree to Proration Plan	June 27	58
Large West Texas Area Nears Proration	July 11	48
Howard-Glasscock Proration Change Follows Hearing	July 11	61
Official Proration of Darst Creek Under Advisement	July 11	76
Operators Move to Reduce Output of Texas Below Current Demand	July 18	38
Technical Committee Finds Texas Demand 736,860 Barrels *By H. J. Struth*	July 18	41
Proration Hearing Set for July 30 at Austin	July 25	61
Attempt to Cut Texas Back 125,000 Barrels. *By H. J. Struth*	Aug. 1	39
Darst Creek Proration Collapses; Production Jumps	Aug. 1	21
Equitable Proration in Texas Would Cause Little Hardship *By H. J. Struth*	Aug. 8	18
Darst Creek Operators Reach Agreement on Proration	Aug. 8	39
Action on Texas Proration Expected Soon	Aug. 15	39
Darst Creek Quota Set at 42,211 Barrels Daily	Aug. 15	39
Texas Production Curb Assures Early Stabilization. *By H. J. Struth*	Aug. 22	39
State Proration Added to Unit Control of Van Production	Aug. 22	39
Pettus Curtailment Needed to Halt Price Reduction	Aug. 22	39
Darst Creek and Salt Flat Fields Under Rigid Proration	Aug. 22	39
Coastal Operators Organize to Observe Curtailment Order	Aug. 22	39
Texas Allowable Production Revised to 775,000 Barrels. *By H. J. Struth*	Aug. 29	39
Texas Proration Launched by Efficient Committee	Aug. 29	39
Texas Production Curtailment Aided by Decline	Aug. 29	39
Proration Will Make Possible Original Lease Pooling Agreement at Van	Sept. 5	39
Pettus Field Placed on 60-day Proration by Committee	Sept. 5	39
Ten Umpires Required to Handle Texas Proration Program	Sept. 12	39
Proration in North Texas Halts Field Work	Sept. 12	39
Howard-Glasscock Operators Ask Chalk Allowable Increase	Sept. 26	39
Danciger Gets Temporary Injunction Against Proration Order	Oct. 3	39
Young County Operators Get Injunction Against Proration	Oct. 10	39
Start Gauging Darst Wells for Proration Schedule	Oct. 10	39
Texas Panhandle Proration Breakdown in Prospect	Oct. 17	39
Commission Plans to Reduce Darst Allowable October 25	Oct. 17	39
Darst Creek Quota Higher Pending Hearing	Oct. 24	39
North Texas Operators Seek Proration Adjustment	Oct. 31	39
Darst Allowable Set at 30,000 Barrels for 90-day Period	Oct. 31	39
Railroad Commission Insists that Orders Must be Obeyed	Oct. 31	39
Texas Proration Equality Hard to Obtain	Nov. 14	39
Winkler Proration Votes for Another Six Months	Nov. 14	39
Railroad Commission's Rights to Prorate Production on Trial	Nov. 14	39
Commission to Seek Relief for Panhandle Operators	Nov. 14	39
Hearing Called to Adopt Rules for Pettus Operators	Nov. 14	39
Legal Action Challenges Darst Creek Proration	Nov. 14	39

	Date	Page
Proration to Continue in Salt Flat Field for 90-day Period	Nov. 14	81
Panhandle Operators Air Grievances at Meeting	Nov. 21	24
Texas Committee Figures are Revised Downward	Nov. 21	73
Commission Order Limits Texas Output to 680,238 Barrels	Nov. 28	23
Texas Crude Demand Placed at 680,000 Barrels. *By H. J. Struth*	Nov. 28	61
Van Increase Has Effect Upon Proration in Three States	Nov. 28	79
Cut Allowable in West Texas and Panhandle	Dec. 12	70
Withdraw Court Advantage on Proration in North Young County	Dec. 19	55
Texas Division Pledges Further Support to Proration	Dec. 19	63
Neff Refuses Approval of Commission Order on Marginal Wells	Dec. 26	57

Engineering, Technical, Research

ENGINEERING—ECONOMIC

Unit Development

Unitization Conference at Tulsa Jan. 22; Committee Named	Jan. 10	63
Co-operative Drilling Plan on California Tidelands	Jan. 17	66
Unit Operation Among Subjects for A. I. M. E. Session	Jan. 24	67
Unit Control Gaining Favor in Oklahoma-Kansas. *By Warren Baker*	Jan. 31	138
"Unitization" Means Co-operation. *By Capt. J. F. Lucey*	Feb. 7	22
Suggested Development Plan Under Unit Operation. *By Robert E. Allen*	Feb. 7	25
Unitization Movement Taking Definite Form. *By Warren Baker*	Feb. 7	27
The Washington Viewpoint on Unitization. *By Dr. George Otis Smith*	Feb. 21	37
AIME Reviews Progress of Unit Operation Plan. *By H. J. Struth*	Feb. 21	35
Davis Heads A. P. I. Committee on Unit Operation	Feb. 21	50
Unit Development Plan for Nie Section Block	Feb. 21	50
Federal Oil Board Report Endorses Unit Operation	June 6	23
Proposed Unit Lease Law Approved by Wilbur	June 20	66
Federal Law Would Permit Unitizing of Leases	July 4	72
Second Van Unit Program Awaits Formal Action of Parties	July 18	63
Development of Unitized Van Area to be Pushed	Aug. 15	57
Schleicher County to Have Unitized Field Development	Sept. 19	81
Van Field Example of Unit Efficiency. *By W. C. Morris*	Oct. 3	67
Unit Operation Gets Most Time on Institute's Production Program at Chicago	Oct. 7	31
Herndon Sees Unit Operation Cure for Overproduction	Oct. 17	35
Kettleman Hills Operators Reach Agreement on Unit Plan	Oct. 24	79
First Year of Van Unitized Plan Completed	Nov. 7	113
Unit Operation is Central Theme for Division of Production Discussions	Nov. 21	26
Engineering and Economic Aspect of Unit Operation. *By T. E. Swigart*	Nov. 21	30
Land and Lease Aspects of Unitization. *By John P. West*	Nov. 21	40
Engineering and Economic Aspects of Unit Operation. *By T. E. Swigart*	Nov. 28	32

ENGINEERING—EXPLORATION

Geological and Geophysical

Geophysics Responsible for 14 New Fields in Gulf Coast. *By Jack Logan*	Jan. 31	145
Does Florida Promise Oil? *By Edward A. Hill*	Feb. 21	32
The Oil Fields of Alberta. *By E. H. Cunningham Craig*	Feb. 28	70
Stereoreflector Advancement in Aerial Surveying. *By Jack Logan*	March 7	24
Wide Range of Subjects Included in Geologists Program	March 7	75
Government Reports on Kern County Geology	April 11	86
Darst Creek Field is Monument to Accuracy of Geologic Findings. *By Jack Logan*	May 23	26
Three Geology Courses at S. S. C. Summer Session	June 6	70
Shreveport Geologists Plan Annual Field Trip	June 20	110
Oklahoma Geology Party Makes Field Trip	June 27	65
Block Acreage, Central Louisiana Tests	July 18	83
Geoelectrical Exploration Methods used in Oil Fields. *By Helmer Hedstrom*	July 25	34
Numerous Geophysical Prospects Prove Disappointments. *By Jack Logan*	Aug. 1	136
Geoelectrical Methods Used in Exploration of Oil Fields. *By Helmer Hedstrom*	Aug. 8	32
Two Great Producing Horizons in Southwest Texas. *By Richard A. Jones*	Aug. 22	38
In Defense of Geophysics. *By John F. Weinzierl*	Aug. 29	46
Types of Oil Field Structures. *By W. F. Cloud*	Aug. 29	55
Physical and Chemical Characteristics of Oil Sands. *By W. F. Cloud*	Sept. 12	40
Geophysics and Deep Drilling Shape Destiny of Gulf Coast. *By Jack Logan*	Oct. 3	63
Barbers Hill Dome Pictured as Cone With Point Down. *By Jack Logan*	Oct. 10	27
Development Program in a Part of the Ventura Avenue Oil Field. *By Joseph Jensen and F. W. Hertel*	Oct. 24	34
Tulsa Geologists Hear Interesting Paper on Kansas	Nov. 14	74

ENGINEERING, DRILLING and PRODUCTION

Drilling Methods—General

Ventura River Bed Operations Require Special Methods and Ingenius Appliances	Feb. 14	46
Better Drilling. *By F. F. Hill*	April 18	26
Drilling and Producing Operations in Kettleman Hills. *By R. I. Brown*	April 25	31
Depth Record for Cable Tools not Excessively Costly. *By H. H. King*	May 16	30
Well Drilling Chart Gives Daily Record with Costs. *By Wm. H. McGrew*	May 30	29
Improved Technique and Safety Mark Modern Developments at Long Beach. *By Brad Mills*	Sept. 26	26
Advanced Methods and Equipment. *By W. A. Sawdon*	Oct. 3	61
Cable Tools now Entering Polish Oil Fields. *By T. S. Szwabowicz*	Nov. 7	60

Production Methods—General

The Problem of Drainage at Kettleman Hills. *By Stanley C. Herold*	March 28	32
Engineers Look Forward on Oklahoma City Problems. *By Floyd Swindell*	May 30	23
Economic Lease Development Involves Close Check on Costs. *By Grady Triplett*	May 30	30
This Oklahoma City Lease Arranged Like an Efficiency Kitchen. *By Floyd Swindell*	June 6	24
Oil is Still Produced by Manual Methods in Roumania	Aug. 1	85
Marginal Oil Fields—Problems in Connection with Their Operation. *By Geo. O. Suman*	Aug. 15	23
Uniform Controlled Flow of Oil Versus Intermittent Open Flow. *By I. B. Williams*	Oct. 3	85
Increasing the Ultimate Recovery of Oil. *By S. F. Shaw*	Oct. 31	34
Improvement in Production Practice. *By W. W. Scott*	Nov. 14	26
Utilization of Energy Available in Gas as the Result of High Pressure Gas-oil Separation. *By H. A. Brett*	Nov. 14	40
Determination of Potential Production of Wells Without Open Flow Test. *By T. V. Moore*	Nov. 14	44

Bibliography

Bureau of Mines Publishes Bibliography of Petroleum	Feb. 28	74

Bits, Dressing

Care Should Be Taken in Dressing Bits. *By Brad Mills*	Aug. 15	26

Boilers, Efficiency

Handy Chart for Determining Boiler Efficiency. *By W. F. Schaphorst*	July 4	37

Boilers, Insulation

Advantages of Insulation on Oil Field Boilers. *By W. H. Meier*	Sept. 19	49

Boiler, Water Heaters

Bureau of Mines Report Shows Use of Boiler-Water Heater with Rotary	Aug. 8	85

Cementing

The Use of Hydraulic Cement in Oil Wells. *By J. B. Case*	Feb. 14	80
Screen Set Before Cementing of Oil String in Gulf Coast	Dec. 26	38

Cleaning Wells

Special Method and Apparatus Used in Cleaning Out Trinidad Wells. *By Jack Logan*	Jan. 24	25

	Date	Page
Completion Methods		
Control of Kettleman Hills Wild Well Points to Heavier Fittings *By Brad Mills*	Jan. 24	23
Two New Completion Methods Tried Out at Oklahoma City	June 27	64
Composition of Zwolle Marl—Best Methods for Completing Wells in New Formation *By H. D. Easton*	Sept. 26	36
Oklahoma City Completion Method Reduces High Pressure Well Dangers to a Minimum *By Floyd Swindell*	Sept. 12	64
Washing in Under Pressure Successful in Oklahoma *By Floyd Swindell*	Nov. 28	25
Hook-up to Handle Sand Blast at Oklahoma City *By Floyd Swindell*	Dec. 5	24
Corrosion		
Aluminum Foil Protective Coatings for the Oil Industry *By Standley Gill, Walter F. Rogers and Stanton U. McGary*	Jan. 31	51
Protecting of Buried Pipe Lines Against Corrosion *By Stanley Gill*	March 14	65
Salt Water Disposal Line Coated Inside and Out *By Warren Baker*	March 14	184
Asphalt Coating to Protect Pipe Line from Corrosion *By Jack Logan*	March 21	32
Methods of Covering Pipe to Prevent Corrosion *By Wm. Moeller, Jr.*	April 10	26
Pipe Protection *By George Wehrle*	May 9	28
Tanker Protection Given to the Public	May 16	36
Methods of Sealing the Seams of Aluminum Foil Tank Coatings *By Stanley Gill*	June 20	28
Crooked Holes		
Mormulae for Acid Bottle Determination *By Alexander B. Morris*	Jan. 10	30
Developments in Acid Bottle Surveying Aid Accuracy *By Brad Mills*	Feb. 14	35
Accuracy of Bore Hole Surveying by Orientation from the Surface *By R. P. McLaughlin*	March 21	23
Crooked Hole Problems in the Gulf Coast *By P. C. Murphy and Sidney A. Judson*	March 21	28
New Machine for Determining Off Vertical Direction of Oil Tests *By Warren Baker*	March 28	40
Legal Aspects of Directional Surveys of Wells *By A. T. Parsons*	April 11	60
Bore Hole Declination Recorder and Strata Meter	May 9	25
Progress in Straight Hole Drilling	May 9	30
Underground Surveying now Standard Practice in California *By Brad Mills*	May 16	83
Crooked Hole Surveying Made Simple by Syfo Clinograph	June 25	38
Deep Drilling		
Deepest Hole on Texas-Louisiana Gulf Coast 8150 Feet *By Richard A. Jones*	Feb. 28	28
Review of Drilling Below 5000 Feet in West Texas *By Richard A. Jones*	June 6	28
Cost of Drilling Deep Oil Wells at Oklahoma City	June 20	57
Diesel Engines		
Diesel Plant Provides Electric Current for Wildcat Drillings *By Brad Mills*	July 4	36
Derricks—Foundations		
Derricks Built on Piles in Maracaibo Lake *By Roy E. Leigh*	March 7	22
Elwood Pier Building an Important Engineering Achievement *By Brad Mills*	May 16	33
Elwood Derrick Floor Eliminates Cellar *By Brad Mills*	Nov. 7	72
Oklahoma City Loads and Soil Demand Special Engineering on Derrick Foundations *By I. P. Bingham*	Dec. 26	26
Drilling Mud		
Hydraulic Mining Methods for Mixing Rotary Mud	Feb. 14	38
Admixtures in Rotary Mud *By C. P. Parsons*	June 20	34
Treatment of Mud Fluid in California *By E. L. Decker*	June 27	31
Central Mud Cleaning Plants Reclaiming Methods *By Brad Mills*	Oct. 10	56
Vibrating Screen Cleans Mud--Make a Big Saving *By Brad Mills*	Oct. 17	25
Characteristics of Drilling Fluid *By C. P. Parsons*	Nov. 7	77
Centrifugal Separator Removes Sand from Drilling Mud *By Brad Mills*	Nov. 7	84
The Mud Problem in Rotary Drilling *By W. A. Sawdon*	Dec. 12	28
Electric Power Costs		
Keep Close Tab on Power Cost on Record Electric Well *By H. J. Struth*	Oct. 31	
Equipment—Special		
"Wild" Mary Sudik Under Control After 11 Days' Effort *By Grady Triplett*	April 11	
Special Equipment Used on Mary Sudik Proves Efficient *By Grady Triplett*	April 18	
New Fishing Tools Invade Mid-Continent	June 2	
Roumanians Transmit Energy to Draw Works by Hydraulic Power	Aug. 1	
Roumanian Uses War Knowledge in Performing Casing	Aug. 29	
Equipment and Methods of Preventing Blow-Outs in Drilling	Sept. 12	
New Hydraulic Brake Has Positive Action *By Brad Mills*	May 2	
Control Head Stands Gas-Driven Sands at High Pressure *By Floyd Swindell*	July 18	
Special Appliances Hurry Control of Santa Fe Springs Fire *By Brad Mills*	July 18	
Turbine Air Lift Pump Applies New Principles *By Brad Mills*	Aug. 29	
Casing Perforating Gun Used Successfully in Arkansas	Aug. 29	
Hook-Off Adjuster Popular at Burbank	Oct. 10	
Fire		
Comar Oil Company Lease Boasts Model Fire-Proof Rig *By Warren Baker*	Jan. 17	
Moreni's Burning Well Defeats All Efforts at Control *By Roy E. Leigh*	Aug. 22	
Flooding		
Valuation of Flood Oil Properties *By Eugene E. Stphenson and I. G. Grettum*	Feb. 21	
Recent Developments in Flooding Practice in the Bradford and Richburg Fields *By C. R. Fettke*	Mar. 7	
Gas Engine Lubrication		
Lubrication of Gas Engines *By D. H. Foster*	Oct. 3	
Study of Gas Fields		
The Sudy of Gas Field *By E. L. Rawlins*	May 16	
Gas Lift Methods		
Injection of Distillate Helps Gas Lift on Heavy Oils *By Brad Mills*	Sept. 19	
Gas Lift Method of Flowing Wells in California	Oct. 3	
Adaption of Gas Lift to Wells of Small Size *By S. F. Shaw*	Nov. 14	
Gas Lift Checks Decline—Lowers Cost at Elwood *By Brad Mills*	Dec. 26	
Gas Oil Ratios		
Has There Been Waste at Seminole? *By S. F. Shaw*	Feb. 7	
Losses Occurring from Disregard of Gas Proportions at Seminole *By Harry Pennington*	Mar. 7	
Wastes—That Occur in Oil Fields *By S. F. Shaw*	Apr. 11	
The Significance of Gas Oil Ratios *By Ray E. Koller*	May 23	
Gas Storage Methods		
Plan Storing Turner Valley Gas in Exhausted Bow Island Sand	July 25	
Gas Well Siphons		
Siphons for Removal of Water from Natural Gas Well	Feb. 28	
Gauging and Gauging Practice		
The Use of Meters to Gauge Fluid Production of a Well *By H. A. Brett*	Nov. 14	
Individual Meters for Lease Gauging *By Brad Mills*	June 27	
Mining		
Mining Accounts for Third of Germany's Oil Output *By Roy E. Leigh*	Dec. 5	
French Mining Method Points Way to Complete Recovery	Aug. 1	
Oil Storage Methods		
Storing Oil in Depleted Sand Successfully Tried *By Brad Mills*	Feb. 14	
Pipe Salvaging		
Deep Rock Salvages Old Pipe for New Construction	June 13	
Portable Drilling Units		
Union Oil Develops Portable Outfit for Shallow Drilling *By Brad Mills*	Dec. 5	
Determining Potentials		
Determination of Potentials Discussed at Session	Nov. 21	

	Date	Page
Publications		
Bureau of Mines Publications Available to Industry	May 2	91
Pumping		
Swabbing is Poland's Most Important Production Method *By T. S. Swabowiz*	Mar. 28	29
Submergible Electric Pump Proves Possibilities in Field Test *By Warren Baker*	Mar. 7	26
New Hydraulic Pump for Deep Wells	Apr. 4	32
Weighing Wells *By L. S. Thompson*	May 30	31
Depthometer Assists in Swabbing Operation in Poland *By Roy E. Leigh*	July 11	43
Pumping Research in California *By Robinson and Robertson*	Aug. 1	234
Larger Horsepower Ratings for Drilling and Pumping *By H. E. Dralle*	Oct. 3	27
Concordia Long Stroke Pump Designed for Deep Wells in Roumania *By Roy E. Leigh*	Oct. 3	96
The Why of Clockwise and Counterclockwise Pumping *By L. A. Little*	Oct. 10	62
The Mechanics of Oil Well Pumping *By H. E. Dralle*	Nov. 28	28
Repressuring		
Problems in Air and Gas Injection in Producing Oil Sands *By E. V. Foran*	Apr. 11	29
California Gas Law Enforcement Revives Interest in Repressuring	Apr. 11	61
Migration of Natural Gas from Injection Wells	June 20	61
Repressuring Project at Haynesville Successful	July 25	78
Factors Affecting Efficiency of Gas-Driven Methods	Sept. 19	61
Maintenance of Pressure at Sugar Land *By George Reid*	Nov. 7	49
Conservation and Utilization of Gas, Sugarland Oil Field, Texas *By Mercer Parks*	Nov. 14	32
A Repressuring Experiment Project to Measure the Effect of Early Gas Injection *By H. D. Wilde, Jr.*	Nov. 14	28
Producing Oil with Minimum Pressure Decline at the Sugarland Field *By H. D. Wilde, Jr.*	Nov. 14	29
Haynesville Repressuring Project Proves Highly Successful *By W. W. Moore*	Dec. 19	28
Research		
Determine Strength of Oil Shales by Compression	June 20	64
Flow Characteristics of Saturated and Unsaturated Crude Oil *By W. F. Cloud*	Sept. 19	40
Effect of Edge Water on Recovery of Oil *By H. H. Wright*	Oct. 17	36
Bureau of Mines Report of Year's Research	Dec. 5	70
Characteristics which Determine the Value of Oil Zones *By George O. Suman*	Dec. 12	39
Rotary Sprocket Chains		
Lubrication of Rortary Sprocket Chains *By C. R. Weiss*	Sept. 26	33
Sample Washing		
Machine Washes Samples Better and More Quickly Than Hand	Apr. 4	35
Separators		
Proper Methods of Installing Oil and Gas Separators *By E. H. Adams*	Sept. 26	41
Shooting Methods		
Oil Well Shooting Methods and Equipment *By W. F. Cloud*	Oct. 24	29
Tanks, Breather Roofs		
A Diaphragm or "Breather" Roof for Oil Storage Tanks. *By Ludwig Schmidt*	Mar. 14	107
Tanks, Insulating		
Bamboo Used for Insulating Tanks in South America	May 2	87
Tanks, Welded		
Welded Tanks Becoming Popular in California *By Brad Mills*	Mar. 14	211
Treating		
Treating Crude Oil Emulsions *By Chas. D. Miller*	June 6	31
Tubing Wells		
Running Tubing Under Pressure Gains Favor in California *By Brad Mills*	July 11	49
Effects of Tubing Flowing Wells, Yates Field *By H. H. Harrison*	Sept. 12	46
Automatic Control Head Makes Possible Running or Pulling Tubing Under Pressure	Oct. 10	61
Tubing Wells Under Pressure *By H. A. Brett*	Nov. 14	36
Installation of Tubing in Big Lake Wells Producing	Nov. 21	77
Work Progressing Tubing Deep Wells at Big Lake	Dec. 12	71
Big Lake Tubing Program Meets First Mechanical Mishap	Dec. 19	74
Standardization		
Louisiana Formations to be "Standardized"	Feb. 14	100
Are American Standard Pipe Taps Suitable for A.P.I. Line Pipe? *By S. B. Terry*	May 2	48
Waste Disposal		
Long Beach Waste Handled by Unit Disposal System *By Brad Mills*	June 20	26
Weight Indicators		
Weight Indicators Should be Treated as Instruments *By George Reid*	Feb. 14	39
Wire Lines		
Effective Lubrication Essential for Wire Rope in Field Service *By H. L. Kauffman*	Jan. 10	32
ENGINEERING—PIPE LINES AND TRANSPORTATION		
Airplane Locates Gas Leaks	Feb. 28	80
Aerial Photography Facilitates Pipe Line Location *By Jack Logan*	Mar. 14	179
Coates Pump Station Pride of the Empire System	Mar. 14	198
New Wrinkles in Welded Line for River Crossings *By R. W. Boggs*	Mar. 14	70
Largest Submarine Oil Line Constructed on Shore	Mar. 14	241
Developments in Pipe Line Welding Practice and Equipment *By H. L. Kauffman*	Mar. 14	248
Suspension Bridge Eliminates Hazardous Under-River Crossings for Pipe Lines	Mar. 28	39
Structural Steel and Pipe Line Welding *By O. A. Tilton*	May 2	95
Munce Compressor Station Largest Gas Engine Driven *By George Reid*	July 11	45
Lone Star Reconditions 40 Miles of 12-Inch Line	July 25	74
Pure-Van Line Completed in Record Time *By W. C. Morris*	Sept. 19	55
Four Grades Through Gasoline Line Without Mixing	Oct. 31	30

Economics—Crude Markets—Statistics

ECONOMIC SITUATION

Year's Profit Depends on Curtailment	Jan. 3	65
Refinery Runs Should Not Exceed 1929 Total *By H. J. Struth*	Jan. 10	23
Bureau Reports Progress on Shale Utilization	Jan. 10	34
West Coast Enters New Year in Better Shape	Jan. 10	66
Overproduction was World in 1929 *By H. J. Struth*	Jan. 17	21
Fuel Oil Surplus Recalls Pioneering in California *By Brad Mills*	Jan. 17	25
Texas Production Question Tied Up with California Situation, Farish Tells The OIL WEEKLY	Jan. 24	39
California Gasoline Shipments to East Coast Probably Will Not Increase in 1930 *By W. E. Green*	Jan. 31	43
1930 Production Limits Prescribed by Demand *By H. J. Struth*	Jan. 31	47
Economic Progress Made During 1929 *By H. J. Struth*	Jan. 31	55
North Louisiana-Arkansas Area Loses in Annual Output *By W. W. Moore*	Jan. 31	88
Deep Drilling Responsible for California Excess	Jan. 31	119
Production Excess Now 252,573 Barrels Daily	Jan. 31	181
Refinery Charging Capacity Being Materially Increased	Jan. 31	204
Controlled Gasoline Supply the Key to Oil Prosperity *By H. J. Struth*	Feb. 21	21
Refinery Expansion Program Continued During February	Mar. 7	31
Economic Position of California Moving Oil to Atlantic Seaboard *By Brad Mills*	Mar. 14	61
Industry in California is Passing Through Adjustment Period *By Brad Mills*	Apr. 25	25
Economic Situation in Texas Demands Lower Production *By H. J. Struth*	Apr. 25	25

	Date	Page
Natural Gas Industry's Future Linked with Southwest	May 2	39
By H. J. Struth		
Carbon Black Production is Cut 25 Per Cent	May 2	98
Large Expenditures to Accompany Natural Gas Development	May 16	38
By H. J. Struth		
Low Prices and High Water Retard Production	May 30	39
California Distribution of Natural Gas Increases	June 6	70
Need for Curtailment of Refinery Runs Still Urgent	June 27	39
More Refinery and Gasoline Plant Expansion Indicated	July 11	42
By George Reid		
Standard of California Moves to End Price War	July 18	56
What Constitutes Safe and Sane Stocks of Petroleum	Aug. 1	53
By H. J. Struth		
Overproduction Intensified by Increased Efficiency	Aug. 1	57
Refinery Expansion Provides Additional Crude Outlet	Aug. 1	62
By George Reid		
European Trade Barriers	Aug. 1	70
By Roy E. Leigh		
Expenditures for Drilling Exceed Last Year	Aug. 1	151
Richfield Oil Company Awarded Navy Contract	Aug. 1	280
Refinery Capacity Expansion Continued During July	Aug. 8	38
By George Reid		
Fuel Oil and Natural Gas Consumed by Power Plants, Increased in May	Aug. 22	56
Natural Gasoline Plants Increased in 1929	Aug. 22	85
Refiners Continue Extensions and Betterments	Sept. 12	39
By George Reid		
Crude Production Within 21,000 Barrels of Economic Quota	Oct. 3	171
Lamont Says Petroleum Industry Can Work Out Its Problems	Oct. 10	65
Institute Survey Shows Excess Gasoline Supply	Oct. 17	73
Big Reduction of Crude Runs Recommended in Report	Nov. 21	23
Petroleum Statistical Situation October 1, 1930, to April 1, 1931, A. P. I. Report	Nov. 21	53
Dutch Shell Director Analyzes Producers' Situation	Nov. 28	24
Natural Gas Industry Forging Ahead Steadily	Nov. 28	46
By H. J. Struth		
Demand Slump Outdistances Production Decline	Dec. 5	59
Outlet Question Overshadows all Else in Oklahoma-Kansas	Dec. 12	67
North Texas Refiners Feeling Slack Demand as Year End Approaches	Dec. 26	57

MARKET REVIEWS—FORECASTS

California's Excess Production is Below 5000 Feet	Jan. 3	26
By Brad Mills		
California Decline Removes Market Threat	Jan. 3	37
Gray County Pipe Line Runs to be Cut 20 Per Cent	Jan. 3	56
Oklahoma City Production at New Peak Despite Bad Weather	Jan. 17	50
Oklahoma Operators Expect Price Schedule to be Restored	Jan. 31	192
Texas Operators Move to Reduce Output to Market Requirements	Feb. 7	33
By H. H. King		
Mid-Continent Crude Oil Prices Uniform at Lower Schedule	Feb. 21	39
California Crude Gets Increase; Production Takes Big Drop	March 14	215
California Prices Up; Production Down; Gas Conservation On	March 21	44
By Brad Mills		
Crude Price Raise Depends Upon Output Reduction	March 21	53
Pipe Lines Taking Less Yates Oil	March 21	65
Production Decline Improves Crude Situation	March 28	47
Crude Market Substantially Improved in all Sections	March 28	56
California and Oklahoma Production Below Current Requirements	April 4	41
Early Advance in Crude Prices Seen for Texas and Mid-Continent	April 11	28
By H. H. King		
Demand Exceeds Production; Higher Crude Prices in Prospect	April 11	39
Texas Operators Hold Key to Crude Market	April 18	23
By H. J. Struth		
Cheap Crude Boosting Demand and Production in Texas	May 2	73
Reduced Refinery Runs Complicate Situation	May 2	99
Gasoline Weakening Under Burdensome Stocks	May 9	41
Refined Market Off Pending More Favorable Weather	May 16	51
Production Uptrend Endangers Market Structure	May 23	39
Olney Producers Seek Additional Market Outlets	May 23	52
Crude Market Outlook Strong in California; Weak in Mid-Continent	June 6	41
Humble Reduces Acceptances in North Texas	June 13	34
By H. H. King		
Critical Areas Stage Production Declines	June 13	39
Mixed Trend Prescribed by Crude Price Changes	June 20	41
Crude Market Congestion Faces Young County Operators	June 20	59
Price of Santa Fe Springs Crude Restored	June 20	65
Humble Rescinds North Texas No Purchase Order	June 27	25
By H. H. King		
Start Oil Through Van Line Early in July	June 27	42
Gulf to Enlarge Refinery at Tulsa	June 27	66
Shipments Give Gasoline Market Slight Strength	July 4	47
Prairie Reduces Crude Purchases 40,000 Barrels Daily	July 11	38
Supply-Demand Balance With Easy Grasp	July 11	57
Van Becomes Market Factor with Opening of Line	July 11	60
Benefits of Lowered Production Offset by Slow Market	July 11	82
Committee Finds Texas Demands 736,860 Barrels Daily	July 18	41
By H. J. Struth		
Reduced Crude Purchases Hurts North Texas District	July 25	65
North Texas Gasoline Market Weak	July 25	71
Further Decline in Crude Output; Refinery Runs Down	Aug. 1	106
Uncertainty in Marketing Conditions Oppresses California Oil Industry	Aug. 1	22
Daily Output Declines Despite Increased Potential	Aug. 8	71
Price Cutting Preventing Justified Market Improvement	Sept. 5	31
By H. J. Struth		
Further Decline Aids Statistical Position	Sept. 5	46
Attack on Proration Weakens Crude Market	Sept. 12	71
California Price Situation Revealed in Open Letter from MacMillan to Standard Oil Company	Sept. 19	31
Crude Price Cut Expected Before Market Improves	Sept. 19	66
Oklahoma Committee Surveys Crude Demand for Last Quarter	Sept. 19	71
California Reduces National Crude Output	Oct. 10	16
Texas Fields Daily Potentials Show Continuous Increase	Oct. 10	18
New Van Line Secures New Jersey Company Share of Oil	Oct. 17	71
Market Confusion Belies Improved Situation	Oct. 24	71
Derby Oil Disconnects from 3000 Barrels of Kansas Crude	Oct. 31	71
Production Resumes Downward Trend; Market Feeble	Nov. 7	61
California Market Weak Despite Heavy Gasoline Consumption	Nov. 7	71
North Texas Gasoline Market Follows Crude Prices Down	Nov. 7	71
Mid-Continent Refined Market Steady; Needs Crude Stabilization	Nov. 14	71
Texas Crude Nominations Will Lower Allowable Output	Nov. 14	71
Lower Crude Prices Stop Unnecessary Drilling	Nov. 14	71
By H. J. Struth		
North Texas Gasoline Market Looking up With Demand	Nov. 14	71
Refiners Increase Runs to Stills; Gasoline Stocks Increase	Nov. 21	71
California Crude and Refined Markets Both Weak	Nov. 21	71
Mid-Continent Gasoline Steady; Jobbers Buying Cautiously	Nov. 21	71
North Texas Refiners Persist in Breaking Crude Prices	Nov. 21	71
Prairie Withdraws as Purchaser in Texas Panhandle	Nov. 28	71
Oklahoma Report Shows Crude Price Average $1.367	Nov. 28	71
Production and Prices Continue to Recede	Nov. 28	71
California Gasoline Market Causing Trouble	Nov. 28	71
Oklahoma Crude Market Shows Further Weakness	Nov. 28	71
Prairie Crude Shipments Make Big Drop and End Is Not Yet	Nov. 28	71
Crude and Gasoline Receipts Increased on Atlantic Coast In 1929—Bureau of Mines Report	Nov. 28	71
Texas Quarterly Report Shows Crude $1.07 Per Barrel	Dec. 5	71
Refinery Runs Now Are at Lowest Point of Year	Dec. 5	71
California Crude Market Very Weak; Gasoline Prices Being Shaded	Dec. 5	71
Howard-Glasscock Producers Balk at Lower Prices for Crude	Dec. 5	71
California Strives to Prevent Market Crisis	Dec. 12	71
Increased Crude Purchases Aid North and Central West Texas	Dec. 12	71
Barometer Shows Status of Supply and Demand Factors	Dec. 19	71
By H. J. Struth		
Texas Panhandle Output Cut to Equalize Market	Dec. 19	71
By H. H. King		
Refinery Runs Show Alarming Gain	Dec. 19	71
California Crude Market Stronger with New Plans for Curtailment	Dec. 26	71

Price Changes

All Texas Crude Prices Slashed	Jan. 17	71
Gulf Crude Prices Now Down to New Low Level	Jan. 24	71
Crude Oil Price Changes During 1929 and Trend of Posted Prices Since 1918	Jan. 31	71
Review of Crude Price Changes, First Half, 1930	Aug. 1	71
Crude Price Changes	Aug. 8	71
Crude Price Changes	Aug. 29	71
Industry Confused by California Price Changes	Sept. 19	71
Crude Price Changes	Sept. 19	71
California Price Cut	Sept. 19	71
Crude Price Changes	Sept. 26	71
Crude Price Adjustment Forced by Underselling	Oct. 24	71
By H. J. Struth		
Crude Price Changes	Oct. 24	71

	Date	Page
Texas Panhandle's Average Crude Price Cut Below $1 Per Barrel	Oct. 24	69
Crude Price Changes	Oct. 31	50
Crude Price Changes	Nov. 7	97
Crude Price Changes	Nov. 21	65
Crude Price Changes	Dec. 26	49

PRODUCTION AND FIELD STATISTICS

Sharp Production Gain Marks Turn of New Year	Jan. 10	37
Field Work More Productive in December. *By H. J. Struth*	Jan. 10	75
Eastern States Output Materially Increased During Year	Jan. 31	85
Bureau of Mines Figures to be More Complete	Jan. 31	196
Drilling Boosts New Production in January	Feb. 7	24
Production at Lowest Point in Year	Feb. 7	39
California Potential Test Gives Production Big Boost	Feb. 28	39
Oklahoma Quarterly Production Report for Fourth Quarter	Feb. 28	107
United States Production Takes Decided Turn Downward	Mar. 7	49
Oklahoma and Texas Potentials Boosted in February. *By H. J. Struth*	Mar. 21	40
Texas Quarterly Production Report for Fourth Quarter	Mar. 21	99
California New Wells Far Behind Last Year	Apr. 4	70
California Production Lowest Since Deep Drilling Started	Apr. 11	64
Louisiana Drilling Ahead of This Time in 1929	Apr. 11	72
Daily Production 100,000 Barrels in March. *By H. J. Struth*	Apr. 11	79
Oklahoma Extends Increased Output	Apr. 18	37
California Production Reverses Trend	Apr. 25	39
New Production Increased During April	May 9	24
Oklahoma Quarterly Production Report for First Quarter, 1930	May 30	94
California Production Nearly Down to Allowable of 596,000 Barrels. *By Brad Mills*	June 6	21
Mid-Continent Production in May. *By H. J. Struth*	June 13	70
Permits Up 124 for Five Months in Louisiana	June 20	112
Tabulation Shows What U. S. Fields Would Do If Opened	July 4	33
Operations and Production Show Improvement. *By H. J. Struth*	July 11	41
Production at Lowest Point Since December, 1928	July 25	53
Sharp Decline in California Development This Year. *By Brad Mills*	Aug. 1	149
Mid-Year Statistical Field Review	Aug. 1	164
Field Activity Increased in July; Production Lower. *By H. J. Struth*	Aug. 8	36
Crude Production Down 23,000,000 Barrels First Half	Aug. 8	40
Monthly Summary of Field Operations	Aug. 8	78
Crude Operations Resume Downward Trend	Aug. 15	37
Oklahoma Quarterly Production Summary	Aug. 29	103
Texas Quarterly Production Summary	Aug. 29	107
Panhandle District Shows 4850 Barrels Production Decline	Sept. 12	88
California Production Declines to Lowest Figure in Years	Oct. 3	192
1930 Oil Production off 44 Million Barrels Preliminary Figures Show. *By Valentin R. Garfias*	Oct. 10	64
September Field Developments Show Sharp Decline	Oct. 10	193
California's New Well Total Will Exceed Early Estimates	Oct. 24	80
Crude Production Shows Slight Upward Trend	Oct. 31	45
Bureau of Mines Figures Reveal Improvement in August	Oct. 31	49
Oklahoma and Texas Declines Cause Production Loss	Nov. 7	91
Oil Well Completions and Production Lower in October. *By H. J. Struth*	Nov. 7	124
Production at Playa del Rey Increases to 35,000 Barrels	Nov. 14	83
Average Production of Sabine Parish Now 8685 Barrels	Nov. 14	87
Texas Production Continues Downward Trend	Nov. 21	59
California's New Well Total for 1930 Far Short of 1929 Record	Nov. 21	90
California Production 279,000 Barrels Below Last Year	Nov. 28	51
Oklahoma Quarterly Production Report for Third Quarter—1930	Nov. 28	108
Texas Quarterly Production Summary for Third Quarter—1930	Dec. 5	107
Drilling Boosted Potentials in November	Dec. 12	83
Summary of Field Operations for November, 1930	Dec. 12	85
California Over-Production at Serious Stage	Dec. 19	51
Production Down in All Major Fields	Dec. 26	43
Decline in Drilling Offset by Large Potential	Dec. 26	45
Crude Production in 1930 Off 111,000,000 Barrels	Dec. 26	47

STOCKS AND STORAGE

Storage Capacities for Petroleum and Petroleum Products on Pacific Coast, Sept. 1, 1929. *By E. T. Knudsen*	Jan. 10	64
California Halts Tank Building Although Practically All Storage Is Full	Mar. 14	63
North Texas Storage Capacity Exceeds 30 Million Barrels	Mar. 14	72
West Texas Has 19,500,000 Barrels Empty Space	Mar. 14	73
Curtailment Tendency Halts Tank Building in Mid-Continent. *By Warren Baker*	Mar. 14	90
California Storage Building Slow Despite Increasing Output. *By Brad Mills*	Mar. 14	95
Magnolia Depletes Storage in Oklahoma	Mar. 21	96
Oklahoma Storage Situation Warns Against Over-Production. *By H. J. Struth*	May 30	21
Houston Building Tanks Near Corpus Christi	June 20	64
Magnolia Withdraws 337,680 Barrels From Storage in July	Aug. 22	56
Report Shows Improvement in Stock Situation	Sept. 5	66
Stock Will Shrink With Present Production and Still Runs	Oct. 17	53
September Stock Shows 5 Million Barrels Decline	Nov. 7	91
Refinery Curtailment Reducing Gasoline Stocks	Nov. 14	60
Gasoline Stocks Decline 731,000 Barrels	Nov. 28	52
Pipe Line Runs		
Magnolia Runs Increased During December	Jan. 24	70
Growing Excess Production Prompts Quick Action in Texas	Feb. 14	53
Magnolia Pipe Line Runs Increased in January	Feb. 21	86
Magnolia Starts Gasoline Through Pipe Line	May 23	82
Magnolia Pipe Line Runs Show Increase in April	May 30	71
Magnolia Line Movement in June Increases Over May	July 18	62
Laredo Pipe Line Runs Total 422,120 Barrels in August.	Sept. 26	73
Movement From West Texas Increases	Dec. 12	56

Features—Editorials—News

EDITORIALS

The Price Cut. *By R. L. Dudley*	Jan. 24	35
Will It Be Barrels or Dollars. *By J. Kent Kidley*	Jan. 31	45
As Editors See Us. *By Grady Triplett*	Feb. 28	66
A Gasoline Tariff? *By R. L. Dudley*	July 18	37
Shall Panic Destroy the Effect of a Good Statistical Position?	Sept. 5	40
Mr. Executive Send Your Men to the Exposition, It Means Money to You	Sept. 26	34
Why Prairies Predicament—An Association of Rumors. *By Grady Triplett*	Dec. 12	23

SPECIAL FEATURES

The Billion Barrel Pool. *By James H. Gardner*	Feb. 21	30
Navy Now Fuels Ships in Motion—Result of Airplane Experiment. *By G. H. Spencer*	Mar. 14	88
Questions and Answers	April 25	37 and 72
Questions and Answers	May 2	62 and 146
Beyond the Range of the Gas Mains. *By B. V. Ellzey*	May 2	44
Questions and Answers	May 23	95 and 112
Plan Plant to Separate Oil from "Ice Cream" Gas	May 30	51
Questions and Answers	May 30	64 and 76
Where Skeeter Chasers Become Necessary Equipment. *By George W. H. Reid*	June 20	108
Skelly Oil Company Installs Largest Field Map Ever Made	June 27	30
Site of First American Oil Well Found. *By W. M. McGrew*	June 27	36
Donart Club Opens Trout Fishing Season	July 4	59
Boy Acts Human Fishing Tool to Recover Lost Bit	July 25	69
Memorials. *By Harry Botsford*	Aug. 22	52
"Ever Used a Japanese Devil Pole?"	Sept. 19	94
Alarm Device Lets Pumper Sleep Unless Things Go Wrong	Oct. 17	30
Phillip Messenger Speaks Spanish with an English Accent	Dec. 19	46

GENERAL NEWS

High Royalties Discourage Leasing of Texas University Lands	Jan. 3	33
Leigh Starts Second Leg of World-Wide Oil Survey	Jan. 31	66
Drill for Carbon Dioxide in Utah	Jan. 31	206
Bids Asked on Kettleman Hills Royalty	Feb. 7	55
Texas University Board States Position on Royalty	Mar. 7	75
Interview With Sir Henri Deterding. *By Roy Leigh*	Mar. 14	56
Shippers Loading Allowance Rejected by Commission at Tulsa	April 11	76

	Date	Page
Natural Gas Developments on the Pacific Coast *By W. S. Gard*	May 9	34
Seek to Quit Title on Government Permit Land	June 20	60
Added Funds Provided for Recovery of Oil Leases	June 20	80
Humble Engineers Field Trip	Sept. 12	69
Planning Historical Oil Display at World's Fair	Sept. 12	117
Swanson Made Chief Economist of Bureau of Mines Division	Sept. 19	81
Kelley's Charge Declared to Be Without Merit or Substance	Oct. 31	42
Texas A. & M. Petroleum Society Elects Officers for the Year	Nov. 14	78
Rycade Oil Corporation Quitting as Operating Unit	Nov. 14	82
Texas Deputy Supervisors Have New Territories Assigned	Dec. 19	90
Embargo on Oil Imports Proposed in Resolution	Dec. 26	59
Four Evening Classes Formed at U. of So. California	Dec. 26	65

FINANCIAL

Pan-American and Indiana Officials Inspect Caribbean Properties	Jan. 17	40
Sinclair Party Inspects Rio Grande Properties	Jan. 17	55
Foster Petroleum Taken Over by Doherty	Feb. 7	55
Humble Earnings in 1929 Reach $32,000,000	Feb. 14	66
Moody-Seagraves Center of Plan for Large Natural Gas Merger	Mar. 21	73
The Texas Corporation Net Profits Show Gain	Mar. 21	74
Magnolia Sells Natural Gas Units to New Utility Combine	April 4	53
Seagraves Reviews Gas Merger Advantages	April 11	42
Standard of California Earned $3.70 per Share	April 11	54
Union Oil Earns 61 cents in First Quarter	April 18	63
Sinclair Consolidated Adds 10,000,000 Shares	April 25	76
Philips Petroleum Forms Natural Gas Subsidiary	May 23	59
Pierce Petroleum Bought by Sinclair Consolidated	May 23	59
Ohio Gains Rank in Texas by Transcontinental Merger	June 20	54
Oil Profits in 1929 Increase 16.2 per cent *By H. J. Struth*	June 20	76
Houston Subsidiary Gets Capital Increase	June 27	63
Cities Service Entering California in Big Way	July 4	76
Northern Texas Utilities Bought by United Gas	July 11	112
Standard-Sinclair Deal Involves $72,000,000 Cash	July 25	32
Landreth Sells Half of Hobbs Holdings to Texas Utility	July 25	71
Phillips Earnings for First Half	Aug. 1	202
Formation of Ten Major Oil Companies Imminent *By Grady Triplett*	Aug. 8	25
Kessler Oil Company Buys Oklahoma Properties	Aug. 15	53
Andrews County Wildcat Acreage in Deal; May Be Next New West Texas Field	Aug. 22	68
Phillips Interests Merged	Sept. 5	42
Phillips-Independent Stock Exchanged on 76 to 100 Basis	Sept. 12	69
Tidal Buys Landreth's Tank Farm and Other Properties At McCamey	Sept. 12	69
Purchase of Loreco by Cities Service Neither Denied or Affirmed	Sept. 12	97
Transfer of Oil Well Supply Assets Await Approval	Sept. 19	78
Cosden Receivership Further Depresses Oil Stocks	Nov. 14	73
Empire Lease and Royalty Buys Half Interest in Miley Production	Nov. 14	70
Oil Company Earnings Reflect Depressions	Nov. 21	64
Humble Declares Extra 50 Cents with Quarterly Dividend	Nov. 28	24
Union Oil Company Renews Move to Acquire Richfield	Nov. 28	80
Standard Oil Dividends are $17,000,000 Above Last Lear	Dec. 5	73
National Supply Company's Profits Good Despite Curtailment	Dec. 5	83
Oil Export Values Slump 30 Million Dollars	Dec. 12	90
Skelly Declares Regular $1.50 Quarterly Dividend	Dec. 19	74
Rival Gas Companies Seek Wyoming Franchise	Dec. 19	74
Stanolind to Take Over Midwest, Dixie and McMan Companies	Dec. 26	54
Standard of California Buys Bynum Leases	Dec. 26	61

LAW AND LEGISLATION

(Also see Curtailment, Proration, Conservation, and Cooperation).

New Mexican Court Holds Oil Lease Ruling Invalid *By Ladd Haystead*	Jan. 3	32
Fort Worth Delegation to Austin Seeks Pipe Line Law Changes	Feb. 28	52
Drastic Change in Pipe Line Laws Before Texas Legislature	Mar. 7	21
Texas Pipe Line Law Waiting Governor's Signature	Mar. 14	225
Lawyers Disagree on Effect of Texas Pipe Line Law	Mar. 21	51
Mississippi Law Regulates Well Drilling	April 4	78
Cooperation Offered State for Pipe Line Law Enforcement	June 6	57
Committee Representatives Confer on Pipe Line Law	June 13	61
Texas Pipe Line Law Data Comes in Slowly	June 27	58
Texas Pipe Line Law Gets Initial Application at Darst Creek	July 4	43
Louisiana Would Tax Natural Gas	July 11	73
Court Upholds University Land Lease Sales	July 18	70
Wilbur Pleased With Kettleman Hills Legislation	July 18	78
Superior Oil Involved in Series of Legal Actions	Aug. 8	62
Wilbur Says Kettleman Hills Leases Will Be Extended	Aug. 8	71
Discuss New Pipe Line Law at Dallas Meeting	June 13	57
Van Operators Threatened With Tax on Royalty Properties	Sept. 26	69
Hearing on Oil Investigation to Be Held Oct. 31	Oct. 10	168
Oklahoma City Gas Franchise Renewed in Election	Nov. 28	80
Wilbur Says Industry Not Hurt by Withholding Government Lands	Dec. 5	26
Railroads' Pipe Line Proposal Draws Reeser Comment	Dec. 19	62

Personnel and Safety

Shell Reduces Industrial Accidents by 20 Per Cent	Jan. 24	31
World's Safety Record Set by Comar Oil Company	Feb. 28	52
Hanlon Heads La.-Ark. Safety Unit	April 11	80
Safety Study to Be Part of Petroleum Course	July 11	112
Two Important Safety Meetings to Be Held July 30 in Houston	July 25	71
Sinclair Safety Winners Save Life of an Infant They Never Saw	July 25	82
Gulf Coast Safety Chapter to Meet in Houston	Sept. 5	59

Field Development and Exploration

Also see Curtailment—Proration, page 3, and Economics—Crude Markets—Statistic, page 7, also Maps, page 18.

FOREIGN

General

Living Conditions in South American Oil Felds *By Roy E. Leigh*	Jan. 3	29
Tendency Is Toward Europeanization of South American Oil Operations *By Roy E. Leigh*	Jan. 10	24
South America Establishes New Production Record *By Roy E. Leigh*	Jan. 31	99
Latin America's Oil Resources Total 13,805 Million Barrels	April 11	76
Building Boom Follows Oil Development in South America *By Roy E. Leigh*	May 2	66
French Parliament Studies Over Government Oil Monopoly	June 6	78
Royal Dutch Annual Report Reviews World Conditions	June 20	30
Sanitary Precautions Improve Health Conditions at Tropical Camps	June 27	34
European Survey *By Roy E. Leigh*	Aug. 1	68

Albania

Prospecting and Drilling	Nov. 21	46

Argentina

"Institute of Oil" Created in Argentina	May 3	36
Annual Production for 1929	June 27	74
Coal-Bearing Land to Be Exploited for Oil	June 27	74
Drilling Activities Show Decline	July 11	54
Crude Production for First Six Months Shows Decline	July 11	54
Dutch Shell Subsidiary Will Build Refinery in Argentina	July 11	53
Work Resumed on Shell Refinery	Oct. 24	44
Survey of Drilling Operations	Oct. 24	44
Government Shake-up Discloses Friendliness	Nov. 7	89
New Oil Policy Outlined	Dec. 26	32

Australia

Geological Surveys Create Interest in Drilling in Wooramel District	May 30	36
Recover Large Amount of Oil in Lakes Entrance Text	July 11	42
Springsure District Reports Show Possibilities of Production in That Area	July 11	42
Search for Oil in New Guinea National Affair	Sept. 19	63
Gas Seepages Discovered	Sept. 19	63
Australian Prospects Cover Large Area	Nov. 7	89
Producers Association Formed	Nov. 21	46
Australian Wildcat Drilling	Dec. 5	53
New Tests for Waitangi	Dec. 5	53
Well Blowout at North Island	Dec. 26	33

Austria

Austrian Test Proves Failure	Oct. 17	44

Belgium

Motor Fuels Congress Meets in Brussels	May 30	36
Increased Demand for Gasoline	June 27	74

Bolivia

Bolivia's Organic Petroleum Law Up for Passage in August	May 2	10
Exploration in Cochabamba	Dec. 26	33

	Date	Page
Borneo		
Gulf Oil Corporation Forms New Subsidiary to Operate In Borneo	June 6	36
Brazil		
Test Begun Near Sao Paolo	May 30	36
Formation of New Company for Drilling Planned	Aug. 15	32
British Guiana		
Exploration Under Consideration in British Guiana	July 4	39
British South Africa		
Wildcat Test Shows Favorable Core Tests	June 6	36
Sinclair Consolidated Pushes Operations in West Africa	July 11	53
Beaufort Beds Located in Cape Province	Aug. 29	64
Canada		
Canadian Annual Report Shows Production Up	June 20	61
Drilling Operations in Ontario	July 4	39
New Gas Well in Turner Valley Field	July 4	39
Pipe Line Proposed From Turner Valley to Winnipeg	July 4	39
Activity Brings New Investments	Nov. 21	46
Record Production for August	Dec. 19	46
Nova Scotia Drilling Operations	Dec. 19	46
September Production High Record	Dec. 26	33
Canal Zone		
Gulf Oil Corporation Abandons Attempt to Locate Production in Panama	Aug. 29	64
China		
Chinese Geological Society	Dec. 19	48
Chile		
Economic Report Issued	July 4	39
Government Controlled Operations	Dec. 5	51
Colombia		
Infantas and La Cira Fields Models of Development *By Roy E. Leigh*	Jan. 17	23
Colombian Oil Legislation Change Again Deferred—Foreign Companies Withdraw *By Roy E. Leigh*	Jan. 24	21
Infantas Field Development Remarkably Successful *By Roy E. Leigh*	Feb. 14	37
French Get Oil Grant in Colombia	Mar. 21	95
Oil Occurrence Noted in Uraba	July 11	54
Exports for First Six Months Show Decrease	Sept. 19	65
Oil Law Being Prepared	Oct. 17	40
Petroleum Law Conference	Oct. 31	39
Government Takes Bonds	Dec. 19	46
Cuba		
Significance of New Oil Well in Cuba *By Chas. E. Coulter*	Apr. 25	29
Asphalt Production in Cuba	June 27	74
Amendments to Mining Laws	Sept. 5	65
Czechoslovakia		
Production Increased Over 100 Per Cent During First Six Months of 1930	Sept. 19	65
East Indies		
Bull-Dog Tenacity Has Won East Indies Petroleum Battle *By King Hamilton Grayson and W. M. Rosser*	June 13	31
Egypt		
Petroleum Basin Opened at Suez	Oct. 17	40
Egyptian Production for 1929	Oct. 3	167
Egyptian Petroleum Situation	Dec. 19	48
England		
British Companies Plan Active Campaigns in Falcon *By Roy E. Leigh*	Feb. 28	26
Royal Dutch Shell Acquires European Companies	May 30	36
Circular Advises No Licenses to be Granted	June 6	36
Weise Method Used to Find Oil	June 27	74
Anglo-Egyptian Meeting Discloses Company's Financial Standing	June 27	74
Apara Trinidad Oilfields Formed	July 4	39
Shell Extends Holdings in European Countries	July 4	39
Refining in England and Scotland Enjoying Rapid Growth	July 4	39
Custom and Tradition Halt English Drilling	Aug. 1	72
France		
Cities Service Establishes Headquarters in Paris	June 6	36
Petroleum Imports Show Increase	June 27	74
New Petroleum Port Being Constructed	June 27	74
Pipe Line Company Organized	Nov. 7	89
Begin Construction of Refineries	Nov. 7	89
Sources of Production	Dec. 5	51
Germany		
American Group Enters German Oil Fields *By Roy E. Leigh*	April 25	26
Extent and Value of German Petroleum Deposits Unknown *By Roy E. Leigh*	May 23	23
Secrecy Keeps German Operating Advances Largely Individual	Aug. 1	106
Survey Establishes Number Drilling Rigs in Germany	Sept. 5	65
Refinery Production for First Six Months	Sept. 19	65
Hademstorf Strike Opens New Field	Oct. 17	41
Neinhagen Field Gets 7500 Barrel Producer	Oct. 24	45
Prolific German Well	Oct. 31	39
Prospecting Will Begin Soon	Nov. 7	89
Prussian Acquisition of Oil Tract	Dec. 5	51
Acquisition of Oil Lands	Dec. 19	46
Increased Production Seen for 1930	Dec. 26	33
Iraq		
Iraq Pipe Line Agreement	Oct. 31	39
Oil Men Conquer the "Messpot" *By Roy E. Leigh*	Oct. 24	25
In Iraq *By Roy E. Leigh*	Oct. 31	26
Italy		
Italian Company Formed for Exploitation of Oil Concessions	June 27	74
Petroleum Prospecting Appropriations	Dec. 19	46
Japan		
Japanese Dutch Oil Company Formed	June 6	36
Sakhalin Showings Being Developed	July 4	39
Japanese Petroleum Resources	Nov. 21	46
Mexico		
Sinclair to Extend Developments in Mexico	May 30	36
National Petroleum Investigating Committee Named by President Rubio	May 30	36
Exportation of Crude During 1929	June 6	36
Mexican Eagle to Build Refinery at Mexico City	July 11	53
Heavy Taxes Prove Drawback to Operations	July 11	53
Tamaulipas Well Flows 1000 Barrels Daily	Aug. 15	32
August Production Estimates	Oct. 31	39
Nine Producers in Nuevo Leon	Nov. 7	89
Unitization Plan Adopted	Nov. 21	46
Field Operations in Vera Cruz	Dec. 5	51
Drilling Campaign to Start	Dec. 5	52
Mexico's Future Petroleum Possibilities *By Jack Logan*	Nov. 28	26
An Interview With Jose Benitez—Governor of Nuevo Leon *By Jack Logan*	Nov. 28	27
Mexico's Future Petroleum Possibilities—Nuevo Leon and Tamaulipas Have Many Prospective Oil Structures *By Jack Logan*	Dec. 5	27
Mexico's Future Petroleum Possibilities—Glenrose Lime Promises Petroleum Production in Coahuila *By Jack Logan*	Dec. 12	31
Mexico's Future Petroleum Possibilities—Petroleum Laws, Economics, and Operating Costs *By Jack Logan*	Dec. 19	37
Mexico's Future Petroleum Possibilities—Monterrey—New Oil Metropolis of Mexico *By Jack Logan*	Dec. 26	34
Production and Drilling Operations	Dec. 19	48
James L. Tatum Is an Authority on Geology of Mexico	Dec. 26	33
Morocco		
Mining Research Safety Zones Established	May 30	36
Evidences of Petroleum Found in Riffian Hills	Sept. 5	65
Nicaragua		
Preparations to Drill for Oil In Nicaragua	May 30	36
Norway		
Petroleum Deposits Reported	Nov. 21	46
Persia		
Discovery of Oil Deposits	Dec. 19	48
Peru		
International Petroleum Corporation Shows Increased Production for First Seven Months	Oct. 17	41
Poland		
Poland's Petroleum Industry Losing Importance *By T. S. Szwabowicz*	Jan. 3	23
Yearly Production Statistics	May 30	36
Crude Production for 1929	July 4	39
Polish Operators Join Forces for Wildcat Prospecting *By Roy E. Leigh*	Aug. 1	94
Galician Area Tested Only in Spots	Aug. 1	95
Polish Oil Industry Not Asleep	Aug. 1	99
Reports of Operations for First Six Months	Oct. 24	44
March Crude Production	May 30	36
Over-Production May Result in Curtailment Measures	July 11	53
Exports for First Quarter Show Increase	July 11	53
Roumania Proposes Curtailment of Production	Aug. 1	71
Astra-Romana's Operations Show Mark of Internationalism *By Roy E. Leigh*	Aug. 15	28
Reports of Drilling Activities and Explorations	Sept. 19	65
Natural Gas Report	Oct. 17	41
Curtailment Measures Cause Decreased Production	Oct. 24	44
Curtailment in Roumania	Dec. 5	52
Curtailment Program Fails	Dec. 19	48

	Date	Page
Russia		
Russian Oil Production in 1929 Exceeded All Records... *By Roy E. Leigh*	Jan. 31	111
Soviet Plans Call for 5,600,000 Feet of Hole in Five Years	Mar. 28	31
Soviet Starts Development of New Field in Central Urals	Aug. 8	62
Imports of Soviet Oils for 1929	June 27	74
Use of Rotary in the Baku Field	July 11	53
Turbo Drilling is Found to be Cheaper Than Rotary Drilling	July 11	42
Baku Field Production Continues Increase	Aug. 15	32
Reports Estimate Sakhalin Resources at 20 Million Barrels	Aug. 15	32
Russian Drilling Operations	Oct. 31	39
Soviet Oil Production	Dec. 5	52
New Discovery Reported	Dec. 19	46
Russia Second in World Production	Dec. 26	32
Sumatra		
Sumatra Development During 1929	June 27	74
Trinidad		
Oil Operations Expanded in Trinidad *By Roy E. Leigh*	Mar. 21	21
Increased Production Distinguishes Trinidad as Largest Producing Colony of England	Sept. 19	65
Standard to Lease Trinidad Area	Nov. 7	89
Turkey		
Mining Legislation of Turkey Revised	June 6	36
Venezuela		
El Mene Only Fully Developed Oil Field in Venezuela.. *By Roy E. Leigh*	Jan. 24	32
Shell Prepared to Reduce Venezuelan Exports	Nov. 14	25-h
Maracaibo Gulf Corporation Acceeded Concessions	June 6	36
April Crude Production	June 6	36
Cities Service Subsidiaries to Develop Paraguana Peninsula	June 6	36
Venezuelan Oil Concessions Conference Registers Note of Confidence	June 27	74
Customs Port Created at Caripito	June 27	74
Crude Stocks Being Reduced	June 27	74
Curtailment Efforts Show Results	July 4	39
Venezuelan Oil Concessions Brings in Four New Wells..	July 11	53
Venezuelan Oil Concessions Acquires 361,000 Acres....	July 11	53
Government Recognizes Transfer of Oil Rights	July 11	53
Colon Oil Corporation Gets New Producer	Aug. 15	32
Large Electrical Plant to be Built in Maracaibo Basin..	Sept. 19	65
Creole Petroleum Corporation Brings in Producer for 1400 Barrels	Oct. 3	167
Crude Production for August	Oct. 3	167
Report Shows 120 Companies Registered for Operating in Venezuela	Oct. 17	41
Colon Corporation's Activities	Dec. 5	51
Drilling Reports in Venezuela	Dec. 5	51
Crude Oil Production	Dec. 19	46
Venezuela Favors Curtailed Production	Dec. 26	32
Las Manueles Field Gets Producer	Dec. 26	32
DOMESTIC		
ARKANSAS		
Source of Arkansas' Deepest Oil Production Not Decided	Jan. 24	62
Arkansas Area Back to Normal Following Flood	June 6	65
Union Annex Wildcat Down to 1500 Feet	June 6	114
Blocking for Smackover Deep Test	July 4	90
Completion of Wildcat Well in Miller County	Aug. 1	226
Possible New Area Indicated in Northwest Arkansas....	Aug. 29	83
Two Failures and Two Gassers Completed in Louisiana-Arkansas	Sept. 26	76
Smackover to Have Test Drilled to 4500 Foot Level....	Sept. 26	77
Three Widely Separated Wildcats Hold Interest in Arkansas	Oct. 24	76
Champagnolle Completion Revives Interest in that Area.	Oct. 31	76
Sugar Creek Trinity Gas Field to Have Gasoline Absorption Plant	Nov. 14	88
Much Water, Little Oil From Urbana Completions	Nov. 28	85
One Pumping Well Completed in Arkansas	Dec. 5	85
Deep Test Planned for Oil Smackover Area	Dec. 26	64
Second Deep Test for Smackover Spudded in	Dec. 26	64
CALIFORNIA		
Elwood		
Pier Drilling May Double Elwood Output	Apr. 11	67
Elwood Has Largest Well	Apr. 18	70
Elwood Now Ranks Third in California	Apr. 25	67
Revival of Pier Building Follows Slump at Elwood	May 2	102
Open Flow at Elwood May Prove Costly	May 23	64
Extend Elwood Field West	July 25	76
Another Well of "Large" Initial Potential is Completed at Elwood	Sept. 12	95
Complete 9000 Barrel Well at 3457 Feet in Elwood Field.	Sept. 26	63
Farthest Tideland Well at Elwood Good for 13,000 Barrels	Oct. 31	70
Huntington Beach		
Huntington Beach Deep Test of Real Importance	May 2	102
Huntington Beach Operators Plan Try for Deeper Production	Aug. 22	77
Testing 400 Feet of Sand in Deep Test at Huntington Beach	Dec. 19	70
Plan Production Test of Deep Well at Huntington Beach	Dec. 26	68
Kettleman Hills		
Kettleman Hills Land Owners Want Well Produced....	Jan. 17	64
Kettleman Hills Well Has Field's First Show of Salt Water	Jan. 31	208
Kettleman Hills Well Not Damaged by Explosion	Feb. 7	60
North Dome Principal Area at Kettleman Hills	Feb. 14	74
Kettleman Hills Operators Seek Lease Confirmation....	Feb. 21	65
Re-Completed Well Gives North Dome Full Quota.....	Apr. 18	70
Interest in North Dome Revived	May 2	100
Hope for Drilling Activity at Kettleman Hills Revived	May 30	67
Kettleman Hills Test Showing Favorable for Big Flow..	July 4	75
Kettleman Operators Wire Wilbur on Colton Bill.....	July 4	76
Complete 6000 Barrel Well on North Dome at Kettleman Hills	Sept. 12	95
Flank Well at Kettleman Hills Makes 11,000 Barrels Daily	Sept. 26	63
Operators Prepare to Develop Fee Lands on North Dome.	Oct. 10	185
Two Wells Started on North Dome at Kettleman Hills..	Oct. 17	78
Operations on North Dome at Kettleman Hills Show Increase	Oct. 24	79
Reach Agreement on Plan to Control Kettleman Development	Oct. 31	68
Three Completions Due at Kettleman Hills Shortly.....	Nov. 21	89
Long Beach		
Long Beach Takes Lead in California Activity	Apr. 4	72
Long Beach in Own Class in California	Apr. 11	67
Long Beach Busiest Spot for California Drilling	Apr. 18	79
New Producer at Long Beach	July 26	76
Long Beach Drills Active Another Six Months	July 4	76
Long Beach to be Active at Least Another Year	July 11	86
Eight-Year Old Long Beach Field Has 2700 Barrel Producer	Aug. 1	223
Long Beach Field Activity is Greatest Since Three Years Ago	Aug. 15	64
Complete 3000 Barrel Well on South Slope at Long Beach	Nov. 7	120
World's Record Well Is Completed at Long Beach	Nov. 14	86
Three-Year Old Long Beach Field Still Good for One Weekly Completion	Nov. 21	98
No Completion Recorded in Long Beach Field	Nov. 28	71
Long Beach Well Completed on World's Smallest Lease..	Dec. 5	74
Decline in Drilling Anticipated at Long Beach	Dec. 12	65
New Wells Increase Potential at Long Beach	Dec. 19	63
Long Beach Declines Despite Numerous Drilling Wells..	Dec. 26	68
North Belridge		
Light Oil In Deep Test at North Belridge	Jan. 24	63
Discovery of Temblor Sand at Belridge Considered Important	Oct. 10	186
North Belridge Well in Temblor Considered Important..	Oct. 17	78
North Belridge Well Good for 2900 Barrels in Temblor.	Oct. 24	88
North Belridge Discovery Well Now Averaging 2950 Barrels	Oct. 31	68
North Belridge Field Test Reaches Temblor Formation..	Nov. 14	88
North Belridge Deep Well to Have Production Test Soon	Nov. 21	88
North Belridge Drilling Starts With Rush Despite Curtailment Programs	Dec. 5	70
Playa Del Rey		
New Venice Field May Change Exploration Theories...	Jan. 3	63
Venice-Playa del Rey Active Area	May 9	70
Intensive Development May Be Expected at Venice-Playa del Rey	May 23	66
Development Continues in Venice-Playa del Rey	June 13	66
Venice-Playa del Rey Getting More Attention than Justified	July 4	70
Playa del Rey Field Is Cloud on Curtailment Horizon...	July 18	70
Playa del Rey Promises Big Producers During Summer..	July 18	70
Playa del Rey Second to Long Beach in Number of Projects	July 25	70
Playa del Rey Status Unchanged; Work of Development Continues	Aug. 15	68
Ultimate Profit of Development at Playa del Rey in Doubt	Aug. 22	70
Activity in Playa del Rey to Continue for Another Month	Aug. 29	68
Playa del Rey Townlot Drilling Reaching Boom Proportions	Sept. 5	70
Completions at Playa del Rey Indicate Field's Importance	Sept. 12	68
Playa del Rey Output Still Under 20,000 Barrels	Sept. 19	68
Development at Playa del Rey Continues to Increase....	Sept. 26	68
Playa del Rey Drilling Continues to Increase	Oct. 3	190
Danger of High Production at Playa del Rey About Passed	Oct. 10	188

	Date	Page
Peak Production at Playa del Rey May Not Exceed 30,000 Barrels	Oct. 17	75
Playa del Rey Production Jumps to 30,000 Barrels Daily	Oct. 31	70
Upper Zone of Playa del Rey Increases Production	Nov. 7	121
Production at Playa del Rey May Exceed 40,000 Barrels	Nov. 21	89
Complete Well in Deep Zone at Playa del Rey	Nov. 28	69
Peak Production Thought to Be Reached at Playa del Rey	Dec. 5	73
Playa del Rey Production Again Increased	Dec. 12	64
Continued Increase in Output at Playa del Rey	Dec. 19	66
Playa del Rey Production Shows Decline	Dec. 26	68
Rincon		
Rincon Prospects Better	Apr. 18	82
Bring in 200-Barrel Well in 2½ Miles Northeast of Rincon Field	Sept. 12	120
Santa Fe Springs		
Santa Fe Springs New Deep Zone Well to Test Soon	Jan. 3	64
Still Plenty of Drilling Underway at Santa Fe Springs	Jan. 17	64
Completions at Santa Fe Springs Continue at Rapid Rate	Jan. 24	66
Santa Fe Springs Should Taper Off After February 15th	Feb. 7	60
Santa Fe Springs Drilling Continues Active	Feb. 14	75
Completions at Santa Fe Springs Falling Off	Feb. 21	65
Santa Fe Springs Drilling Declines	Feb. 28	64
Open Test Apparently Harmed Santa Fe Springs Wells	Mar. 7	71
Santa Fe Springs No Longer Production Threat	Mar. 14	240
Santa Fe Springs Fast Passing as Market Buster	Mar. 21	75
Pending Tests to Determine Deep Campaign at Santa Fe Springs	Arp. 4	70
Santa Fe Springs Potential Now Less Than 200,000 Barrels	Apr. 11	65
Failure of Clarke Zone Eliminates It as Production Factor	Arp. 18	70
Santa Fe Springs Completions Show Low Average Initial	Apr. 25	67
Average Well Production Down at Santa Fe Springs	May 2	99
Santa Fe Springs Shut-in Has Doubtful Conservation Results	May 9	67
Santa Fe Springs Production Continues Downward	May 16	77
Santa Fe Springs as Production Threat Definitely Through	May 23	63
Active Test at Santa Fe Springs Down to 45	May 30	67
Santa Fe Springs Down; New Production Small	June 13	68
Santa Fe Springs Decline Not Checked by New Wells	June 27	70
Santa Fe Springs Work at Low Ebb	July 4	75
Santa Fe Springs General Decline Continues	July 11	83
Santa Fe Springs Activity Shows Further Decline	July 25	75
Number of Drilling Wells at Santa Fe Springs Down to 12	Aug. 15	64
Santa Fe Springs Activity at Lowest Level	Dec. 12	64
Miscellaneous and Wildcats		
California Wildcat Effort in 1929 Not Notably Successful *By Brad Mills*	Jan. 31	123
Interest Revived in Inglewood Townlot Area	April 25	70
California Wildcatting Activity Off Slightly	May 23	66
California Wildcats Not Now at Critical Stage	July 25	75
Tideland Well at Santa Fe Springs Is Largest in California	Aug. 15	66
Production of Los Cerritos Deep Wells Holds Up Well	Oct. 31	72
Portersville Prospects Dim as Numerous Abandonments Loom	Oct. 31	72
Wildcatting in Santa Barbara County Shows Decline	Nov. 21	90
Significance of Weed Patch Discovery Still Unknown	Nov. 28	70
Terra Bella District Activity Shows Decline	Nov. 28	72
Weed Patch Discovery Revives Kern County Lease Activity	Dec. 5	74
Oil Discovered in Temblor in Lost Hills Field	Dec. 12	64
Light Oil Production in Prospect for Northern California	Dec. 19	69
Buttonwillow Deep Test Shows Promise of Oil and Gas	Dec. 26	69
Wildcat at Coal Oil Point Attracts Wide Interest	Dec. 26	69
COLORADO		
Unusual Substance Found in Colorado Test	March 14	262
Drill Garmesa Structure for Gas Production	March 21	73
New Colorado Gas Field on White River Structure	June 6	70
Greasewood Discovery Well Shows Production Increase	Nov. 7	115
Work on Greasewood Dome Discovery Well Shut Down	Nov. 14	78
Greasewood Dome Test Again Deepened	Dec. 26	63
Berthoud District, Colorado, to be Scene of Drilling Activity	Dec. 26	61
Greasewood Dome Well has 360 Barrels of Settled Production	Dec. 19	78
KANSAS		
Eastborough		
Two Eastborough Wells Have Spotlight in Kansas	July 25	73
Eastborough with Eight Wells Center of Kansas Interest	Aug. 8	61
Eastborough has Good Prospects with Two Formations	Aug. 29	48
Eastborough Field Extended One-Half Mile Northeast	Sept. 26	68
McPherson County		
McPherson County Starts 23 New Tests During Week	Jan. 17	51
McPherson County Most Active Area in Kansas	March 14	228
McPherson County Leads Kansas in Number of New Wells	May 16	64
Complete 500-Barrel Well in McPherson County, Kansas	Nov. 7	107
Shurr Pool		
Lack of Outlet Checks New Shurr Pool Production	March 7	61
Shurr Pool Production Based on Pipe Line Runs	May 23	59
Shurr Pool Restricted by Lack of Outlet, Relief in Sight	July 4	70
Voshel Pool		
Voshel East Side Tests Fail to Find Oil at Usual Depth	Jan. 10	54
Extension of Voshel Pool Proration Opposed	Jan. 17	51
Two Voshel Pool Completions; Field Is Not Curtailed	Jan. 31	191
Voshel Producer Improves Outlook for Eastside	Feb. 7	53
Voshel Pool Gets Extension; Potential 12,000 Barrels	Feb. 28	51
Kansas Drilling Centers in Voshel Pool	April 18	53
Voshel Pool Curtailment Extended Another Month	May 2	86
Voshel Takes First Rank Among Kansas Fields	May 30	57
Wildcats and Miscellaneous		
Kansas Test Not Showing up to Expectation	Jan. 3	66
New Fields Give Kansas Upturn in Production During 1929 *By Warren Baker*	Jan. 31	77
Western Kansas Drilling Wells Number 209 in 36 Counties	Feb. 14	66
Ritz Production Extended Twice in Two Weeks	March 21	64
Prairie Wildcat Opens New Pool in Western Kansas	April 4	52
Bring in 10,000,000 Foot Gasser in Western Kansas	April 25	57
Thorough Test of Western Kansas Possibilities Underway *By Floyd Swindell*	June 13	23
Sedgwick County Interest Revived by Completion	June 27	64
East Kansas Most Active with New Wells	July 11	79
Lack of Market Holds Down Development in Kansas *By Floyd Swindell*	Aug. 1	134
Discovery of Another Central Kansas Oil Pool is Imminent	Aug. 1	211
New Oil Pool is Opened in Rice County Kansas	Aug. 15	51
Third Producer is Added to Peasel, Sumner County Kansas	Sept. 5	57
New Development Continues to Decline in Kansas Fields	Sept. 12	85
Discovery of New Pool in Cowley County Seems Likely	Sept. 19	78
Hugoton Field Outstanding Development in Kansas *By Floyd Swindell*	Sept. 26	28
Development Takes Upward Trend in Kansas During Week	Oct. 3	185
Kansas is Active with 29 New Locations in 16 Counties	Oct. 17	65
Completion Opens New Area in Kansas Near Raymond Pool	Oct. 24	67
Announce Twenty New Locations in Kansas Fields for Week	Nov. 14	74
Ritz Pool Gets 3324-Barrel Well in Viola Lime	Nov. 28	75
Discovery South of St. Louis Pool Attracts Little Attention	Nov. 28	76
Operations in Kansas Slump to Lowest Point	Dec. 5	77
Kansas Field Work Continues at Low Ebb	Dec. 12	68
KENTUCKY		
Western Kentucky Development Slowed by Shut-down Agreement *By Wm. H. McGrew*	April 4	21
LOUISIANA		
North Louisiana		
Two Small Wells Completed in Sarepta Field	Jan. 3	63
Drilling Campaign Starts at Zwolle; Sarepta Area Also Active	Jan. 10	71
Zwolle East Extension Test Fails to Produce	Jan. 17	62
Second Zwolle Extension Producer Makes Good Pumper	Jan. 31	203
Abandon Joint Deep at Colton Valley	Jan. 31	204
Sugar Creek Test Being Watched with Interest	Jan. 31	206
Claiborne Parish Wildcat has Interesting Show of Oil	Feb. 7	62
Zwolle Extension Area Producer Flows 40 Barrels Hour	Feb. 14	79
Zwolle Extension Indicates Producing Areas Connected	Feb. 21	64
Claiborne Parish Wildcat Test Showing for Oil Production	Feb. 28	61
33 New Tests Starting in Two North Louisiana Fields	March 7	73
Zwolle Extension Area Gets Salt Water Show in Three Tests	March 14	236
Zwolle Extension Wells Stop Producing	March 21	71
DeSota Parish Producer May Mark New Oil Field	March 28	65
Cartersville Daily Production Nearly 5,000 Barrels	April 4	64
Cartersville Acreage Changes Hands	April 4	84
Cartersville Production Shows Rapid Decline	April 11	70
Efforts to Extend Cartersville and Zwolle Areas Fail	April 18	64
Little Drilling Below 5000 Feet in North Louisiana	April 25	28
Cartersville Well Producing from New Depth	April 25	62
Zwolle Field Extended in Three Directions	May 2	103
Zwolle 12-Mile Extension Well Again Goes Dead	May 9	62
First Test of Woodbine Formation in New Section of Zwolle	May 16	74
High Water Halts Operations in Shreveport Area	May 23	60
Resume Operations as Flood Waters Recede	May 30	61

	Date	Page
Latest Big Zwolle Producing Stops Flowing	June 13	66
Development in Concordia Parish Looms	June 20	71
Bellevue Well Tests Heavy Flow of Gas	June 27	65
Deeper Exploration Attracting Interest at Zwolle	June 27	71
Gas Well Completions Feature Week in North Louisiana	July 4	78
Hope for Zwolle Production at New Depth	July 11	88
Zwolle Drilling Campaign Slows: Wildcat Work Progressing	July 18	81
Caddo Parish Test is Disappointing: New Bionville Parish Field Likely	July 25	77
North Louisiana's Deepest Oil Well Completed at 5506	Aug. 8	75
Zwolle Now Seventeen Miles of Freakish Producing Territory	Aug. 22	78
Bellevue Shallow Field Well Opens Up New Trinity Production	Sept. 5	76
North Louisiana's New Upper Trinity Zone Showing Salt Water	Sept. 12	96
Zwolle East Extension Well Renews Activity	Sept. 19	85
Second Zwolle East Field Extension Well Completed	Oct. 3	200
Zwolle Field is Extended Mile South by Largest Well	Oct. 10	188
Zwolle is Extended Two Miles Further Southeast	Oct. 17	79
Two Tests Below Blossom Hold Promise at Zwolle	Nov. 7	120
Zwolle Field is Extended One Mile Southeast	Nov. 21	92
Zwolle East Field Extended Quarter Mile Southwest	Nov. 28	85
Out-of-State Operators are Attracted to Louisiana	Dec. 5	85
Zwolle Well Connects Two Southern Extensions	Dec. 5	85
Zwolle has Seven Locations; Extension Test Spraying	Dec. 12	79
Holly, De Soto Parish, Gets Large Gas Well	Dec. 12	79
Bienville Parish Gets Two Failures During Week	Dec. 12	80
Urbana District Records Good Oil Well at 3532 Feet	Dec. 19	87
New Drilling Activity Declines in North Louisiana	Dec. 19	87
Two Link Wells Hold Interest in Zwolle	Dec. 26	64
Claiborne Parish Test to Go to 5000 Feet	Dec. 26	64
Louisiana Gulf Coast		
(Also see Texas Gulf Coast)		
Caillon Island First New Field in 1930	Jan. 3	202
Bayou Bouillon Production Gets Westward Extension	March 21	69
Evangeline Test Sets New Depth Record for Gulf Coast	June 27	61
Complete Five Producers in Vinton Field	Aug. 1	218
Pure Oil Plans Ultra Deep Test for Sweet Lake Field	Oct. 17	71
Inactivity Marks Operations in South Louisiana	Oct. 31	63
Shell has 1050 Barrels Daily in White Castle Field	Nov. 7	119
Black Bayou Dome Now has Five Producing Wells	Nov. 7	119
Vacuum Makes Locations for Iowa Salt Dome Test	Nov. 14	81
Three Completions Recorded at East Hackberry	Nov. 28	82
Ten Completions Recorded in Louisiana Gulf Coast	Nov. 28	83
East Hackberry has Two Wells Completed for 1512 Barrels	Dec. 5	84
Two Completions Recorded in Jennings Field	Dec. 19	88
MICHIGAN		
Muskegon Field Shows Rapid Decline in Both Oil and Gas	Jan. 10	26
MISSISSIPPI		
Gulf Makes Location for Test in Mississippi	Feb. 7	58
Mississippi Tests Report Satisfactory Progress	March 7	69
Satisfactory Progress Being Made in Mississippi Wildcat Tests	March 14	237
Mississippi Wildcat Well Flows Salt Water	April 11	72
Mississippi Wildcat Well Plugged Back for Gas	April 18	72
Mississippi Wildcat Test Drilled Deeper	April 25	90
Mississippi Drilling Operations on Increase	May 2	104
Third and Largest Gas Well Completed in Jackson Area	May 16	95
Two New Locations Made in Mississippi	May 23	54
Jackson Area Suffers Setbacks During Past Week	May 30	62
High Water Interferes in Mississippi Development	June 6	90
Jackson Operations Center in Neshola County Area	June 13	62
Plan Test of Area 20 Miles North of Jackson	June 20	71
Mississippi Again Active with 11 Tests Drilling	June 27	72
Core Drilling on Jackson Anticline	June 27	86
Second Commercial Gas Well Completed at Jackson	July 11	90
Mississippi Area Gets Three Gas Wells, Two Big Ones	July 18	81
Mississippi New Drilling on Increase	Ju'y 25	78
Drilling Spreading to States East of Mississippi *By W. W. Moore*	Aug. 1	153
Four New Locations Announced for Tests in Mississippi Gas Area	Aug. 22	70
Wild Gas Well in Jackson City Limits Kills Workman	Aug. 29	78
Jackson Wild Gas Well Under Control; Four Locations Made	Sept. 5	78
Jackson Gas Area Extended One-Fourth Mile Southeast	Sept. 19	84
Jackson Gas Field Gets 30,000,000 Foot Well	Sept. 26	77
Jackson Gas Well May Gauge 30 Million Feet to One Hundred Million Feet of Gas	Oct. 3	202
Rankin County Gas Well is Jackson Field's Eighteenth	Oct. 17	80
Oil Show in Jackson Well Renews Interest in Area	Oct. 24	78
Oil Show in Jackson Well of no Commercial Value	Oct. 21	64
Await with Interest Test Northeast of Jackson Area	Nov. 14	88
Jackson Field Adds 8,000,000 Foot Well	Nov. 21	92
Rankin County Test Promises Large Gas Production	Nov. 28	85
Jackson Gas Field Adds Two More Producers	Dec. 5	88
Two New Gas Wells Brought in for Jackson Area	Dec. 12	80
Jackson Gas Field Year Old has 27 Producers	Dec. 26	29
Jackson Adds Large New Gas Well During Week	Dec. 26	63
MONTANA		
International Oil Field is Due Extensive Drilling	Feb. 21	66
Red Coulee Well Makes Favorable Showing	April 4	74
New Canadian Border Field Extended Mile	April 11	74
Border Field Extended Three Miles	July 11	80
Amsells Structure is Proven for Gas Production	Dec. 19	78
NEBRASKA		
Nebraska Still Hopes for Oil and Gas Production	Jan. 31	210
Nebraska's Wildcat Activity Depends on Present Tests	June 13	65
NEW MEXICO		
Output of New Mexico Pumpers Nears Line Requirements	Jan. 3	57
Lea County Well at Lower Depth Opens More Territory	Jan. 10	56
Lea Field Producing Wells Increased to Six	Jan. 17	55
Hobbs Extension Producers Make New Record for New Mexico	Jan. 31	195
Limiting Runs to Reduce Output of Lea Field, New Mexico	Feb. 7	54
Lea County Production Reached New High in January	Feb. 21	59
Second Producer Completed in New Pool in Lea County	March 7	65
Hobbs Field has Ample Line Outlet in Prospect	April 4	58
Real Drilling Campaign Getting Under Way in Hobbs Field	April 11	53
Hobbs Locations Being Extended Along Long Narrow Strip	April 18	57
Purchasers Seek Contracts for New Mexico Production	April 25	53
New Tests Follow Rail and Pipe Line Connections in Hobbs Area	May 9	58
Line Outlet Makes Hobbs Field Potential Market Threat	May 16	70
New Mexico Forcing More West Texas Restriction *By H. H. King*	May 23	35
Drilling Activity at Hobbs After Opening of Outlets	May 23	52
Hobbs Field Draws Interest as Drilling Activity Increases	June 6	26
Hobbs Possibilities as Market Threat Due for Early Shutdown	June 6	64
Difficult Drilling Conditions Makes Cost High at Hobbs	June 6	72
Expect Big Production from Shell Test in Hobbs Field	June 13	56
Hobbs Production Possibilities Proven by Important Completions	June 20	36
Hobbs Develops Big Production, No Curtailment Planned	June 27	28
Atlantic's New Mexico Line Nearing Completion	June 27	29
Development at Hobbs Now Going Forward Steadily	July 25	44
Gauge Through Tubing Reduces Hobbs Potential	Aug. 1	212
Hobbs Operators Seek Re-gauging of Wells on Open Flow Basis	Aug. 8	43
Drilling Activity at Hobbs Approaching Peak Level	Aug. 15	54
Completion of Good Wells Boosts Hobbs Potential	Aug. 22	71
Hobbs Potential Production up 100,000 Barrels	Aug. 29	82
Hobbs Production Area Extended One-half Mile Northwest	Sept. 5	84
Hobbs Proving "Shoe-string" Type of Oil Field *By H. H. King*	Sept. 12	43
Hobbs Potential Near 500,000 Barrel Mark	Sept. 19	81
Six New Locations Announced for Hobbs Area	Sept. 26	71
Hobbs Field Potential Now 526,000 Barrels Daily	Sept. 26	71
14 Hobbs Wells Add 16,000 Barrels Potential Daily	Oct. 3	165
New Drilling at Hobbs Cut to Minimum in Past Week	Oct. 10	181
Hobbs North End Wells Larger Than Anticipated	Oct. 17	66
Hobbs Drilling Decline Checked by Orders for Six New Locations	Oct. 31	61
New Hobbs Well Nears Record for Field	Nov. 14	79
Eight New Wells Boost Hobbs Potential Beyond Million	Nov. 21	82
Two Companies Seek Higher Allowances at Hobbs	Dec. 5	81
Hobbs Active Drilling Reduced to Eight Wells	Dec. 12	72
Wildcat Test Promises Four-mile Extension at Hobbs	Dec. 19	78
OKLAHOMA		
Asher-Wannette		
Asher-Wannette Center of New Interest in Oklahoma	June 20	58
Wanette Sand not Definitely Correlated *By Floyd Swindell*	Sept. 5	40
Wanette Well's Production is Increased on Deepening	Nov. 21	74
Seminole		
Harris Pool in Seminole County Active After Completions	Jan. 3	52
Newest Seminole Pool Placed on 20 Per Cent Proration	Jan. 17	59
Many Inovations Accompany Oil Operations in Seminole Area	June 20	74

	Date	Page
New Seminole Area Producer Makes 1560 Barrels After Shot	Sept. 5	56
Test East of Little River Gets Oil at 2654 Feet	Oct. 3	184
Carr City Most Promising Area in Greater Seminole	Oct. 10	177
Greater Seminole District Active During Past Week	Oct. 31	56
Greater Seminole Output Nears Half Million	Nov. 14	75
Earlsboro		
East Earlsboro Field Attains New Production Peak	Jan. 24	52
South Earlsboro Extension Test Flow 250 Barrels Hour	Feb. 14	65
New Pimple South of Earlsboro Appears Small but Prolific	Feb. 21	56
Opening New Pool Southwest of Earlsboro Seems Likely	May 30	57
Konowa		
Konowa Pool Promises Extension in Two Directions	Feb. 7	52
Konowa Developments Leave Much Yet to Learn About Pool	March 14	228
Small Producer Extends Konowa Pool	March 28	68
Oklahoma-City		
Oklahoma City Area Makes Another Production Record	Jan. 3	52
Oklahoma City Curtailment for January Set at 50 Per Cent	Jan. 10	40
Oklahoma City Takes Rank as State's Greatest Oil Field *By Warren Baker*	Jan. 10	50
Water Intrusion Threatens Lime Wells at Oklahoma City	Jan. 10	53
Poor Wells at Oklahoma City; Many Wells Due	Jan. 24	51
Oklahoma City Pool Gives State New Possibilities *By Warren Baker*	Jan. 31	68
Water Helps Weather Hold Back Oklahoma City Production	Feb. 7	52
Oklahoma City Completions Add Much to Potential of Field	Feb. 14	65
Oklahoma City Potential Raised; Lines Approaching Limits	Feb. 21	53
Oklahoma City Above Line Capacity	Feb. 28	51
Oklahoma City Producing Area Extended to West	March 7	61
Allowable Output Cut in Half at Oklahoma City	March 7	62
Oklahoma City Field Gets Two Important Extensions	March 14	227
Oklahoma City Producing Area Gets Several Extensions	March 21	63
Important Tests at Oklahoma City Near Completion	March 28	68
Set Long String of Nine-Inch at Oklahoma City	March 28	68
Pipe Lines Increase Runs from Oklahoma City	April 4	38
Wilcox Sand May be Found in Oklahoma City Well	April 4	51
Work Resumed on 147 Wells at Oklahoma City	April 11	53
Oklahoma City Meeting to Fix Drilling Regulations	April 18	53
Oklahoma City Production Back to Normal	April 18	54
Oklahoma City Casing Schedule Fixed	May 2	86
Oklahoma City North End Sets Big Well Record	May 22	86
Production at Oklahoma City Extended West	May 2	86
Development Marks Oklahoma City Great Light Oil Area	May 9	53
No Immediate Change in Output at Oklahoma City	May 16	64
Oklahoma City Pool May be Extended Northwest	May 23	59
Oklahoma City Extended with Town Lot Drilling	May 30	57
Oklahoma City Gets Mile Extension	May 30	57
Oklahoma City Production Peak at End of May	June 6	62
Another Wilcox Sand Well at Oklahoma City	June 13	64
Oklahoma City Production Off 17,889 in Past Week	June 20	56
Three Water Producers Mark Oklahoma Edge *By Floyd Swindell*	July 4	22
Oklahoma City's South End Gets Several Large Producers	July 11	79
Flow "Under-Produced" Wells Hikes Oklahoma City Output	July 18	69
Water Supply at Oklahoma City *By Floyd Swindell*	July 25	36
Oklahoma City Shut-Down Agreement Extended 12 Days	July 25	72
Oklahoma City Field—History—Geology—Mechanics *By Floyd Swindell*	Aug. 1	64
Oklahoma City Wells Flow One Day in Twelve Under Plan	Aug. 1	211
Production Spotted on South End of Oklahoma City	Aug. 8	61
Oklahoma City Field Extended to West; New Shut-In Started	Aug. 15	53
Three Big Wells Added in North End at Oklahoma City	Aug. 22	67
Drilling Campaign in Oklahoma City Field Nearing Climax	Aug. 29	73
Oklahoma City has Big Week with 30 Completions	Sept. 5	56
Completions Total 98 for Oklahoma City Field in August	Sept. 12	85
Drilling at Oklahoma City has Passed Maximum Stage	Sept. 19	77
Completions at Oklahoma City Total 150,000 Barrels	Sept. 26	67
Oklahoma City Locations and Completions Total 15 Each	Oct. 3	185
World's Largest High Gravity Well at Oklahoma City	Oct. 10	177
Oklahoma City South Wider Than First Thought	Oct. 17	65
Fourteen Wells Completed at Oklahoma City During Week	Oct. 24	67
Oklahoma City Production Extended Southwest	Oct. 31	56
Extend Oklahoma City Pool Nearly Mile Northwest	Nov. 7	107
Oklahoma City's Third Gusher Finally Put Under Control	Nov. 7	108
Oklahoma City Production Extended Two Ways	Nov. 14	74
Oklahoma City Now has 127 Operations and 643 Wells	Nov. 21	74
Oklahoma City Runs 103,000 Barrels Daily	Nov. 28	75
Oklahoma City has Produced 40,202,900 Barrels in Two Years	Dec. 5	76
Oklahoma City Production Runs Show Loss from Last Week	Dec. 19	71
Oklahoma City Adds 8 New Operations as 7 Wells are Completed	Dec. 26	56
Tatums		
Tatums Pool Most Active in Southern Oklahoma	Aug. 29	73
Tatums Pool has Busy Week with Five Completions	Oct. 31	57
Tatums Extension Well now Drilling Below 4012 Feet	Nov. 14	75
Tatums Pool's Largest Well Completed for 2468 Barrels	Nov. 28	76
Limits of Tatums Pool Depend on Five Drilling Wells	Dec. 5	77
Tatums Pool Limits Defined in Two Directions, Extended Another	Dec. 19	72
Wewoka		
Two Wells Near Pay in Wewoka Townsite Area	Dec. 5	77
Wewoka Townsite to be Center of Development Work	Dec. 19	71
Wewoka Gas Well Fire Extinguished	Dec. 26	55
Wildcats and Miscellaneous		
Mission Deep Test Showing Oil Drilling Below 5000 Feet	Jan. 3	53
Northwest Oklahoma Wildcat Areas Gaining Interest	Feb. 28	37
Another Wilcox Sand Pool Promised North Oklahoma	April 25	56
Reiter-Foster Well Brought in as Producer at 4737 Feet	April 25	57
Deep and Shallow Development Includes Oklahoma's Activity	June 6	62
New Depth Yield Oil in South Oklahoma Pools	June 27	64
Water Instrusion Removes West Chandler as Market Threat	July 4	70
South Oklahoma Pools Have Active Campaigns	July 11	79
Two New Producers Added at West Chandler	July 25	73
Wildcat West of Seminole Looks Favorable for Producer	Aug. 22	68
Completions Made Rapidly in Carter County Area	Oct. 17	65
Carr City Well Estimated at 1000 Barrels	Nov. 7	107
Logan County Wildcat Drilling Ahead in Wilcox Sand	Nov. 21	74
Harper County Well Deepest in Oklahoma	Nov. 28	76
Wilcox Most Prolific Oil Sand in Oklahoma	Dec. 26	65
SOUTH DAKOTA		
South Dakota's First Oil Well Makes 25 Barrels	Jan. 10	86
South Dakota Wildcat Well Holds Interest	April 18	65
Gas Well Expected in South Dakota Test	May 23	95
TEXAS		
Texas Panhandle		
Gray County Proration Plans not Fully Realized	Jan. 10	55
Moore County Producer Declines Rapidly When Water Intrudes	April 18	56
Gray County Production Nears Outlet Capacity	May 9	58
Gray County Production Again Passes 70,000 Barrels	May 16	67
Gray County Production at New Peak for Year	June 6	55
Panhandle Crude Buyers Reduce Purchases 7000 Barrels	Aug. 1	213
Phillips Extends Line to Morton-Reeder Pool	Aug. 1	232
Gray County Completions Serve to Complicate Reduction Plans	Aug. 15	58
Leck-Daugherty Extension Will Revive Drilling Activity	Aug. 29	75
Gray County Operators Build Up Potentials for Proration	Aug. 29	76
Panhandle Operators Boost Production to 101,395 Barrels Daily	Sept. 5	60
Gray County Producer Starts Offset Campaign	Sept. 26	70
Development of Wildcat Area in Gray County Assured	Oct. 3	187
New Gray County Area Gets Thorough Drilling	Oct. 31	59
Fifteen Tests Around Sullivan Well Nearing Completion	Nov. 28	77
Failures Further Remove Threat of Sullivan Area	Dec. 5	89
Complete Another Good Well in Sullivan Area	Dec. 19	74
Texas Panhandle Slow in Responding to New Quota	Dec. 26	57
North Central Texas		
Purchasers Storing Wilbarger Oil for Account Producers	Jan. 3	56
No Important New Discoveries in North Central Texas *By H. H. King*	Jan. 31	129
Three Wildcat Strikes in Three Counties in North Texas	Feb. 14	68
Swastika Expansion Starts Drilling Campaign	April 11	56
Young County Producer Best in North Texas in Five Years	April 18	55
Drilling Rush Underway in Graham Field	May 2	90
New Finley-Brown Wells Boost Brown County	May 2	90

	Date	Page
Finley-Brown Field Sends Output Upward	May 30	49
Four Tests Fail in Search for Big Young County Production	June 13	57
Callahan County Wildcat Flowing by Heads	June 20	60
Finley-Brown Field has 4840 Barrel Decline	June 20	60
Finley-Brown Outpost Well Makes Heavy Flow	June 27	58
Unfavorable Market Curtails Drilling in North Texas... *By H. H. King*	Aug. 1	143
Takings from North Texas Wells Cut to 12 Barrels Each	Sept. 9	67
Efforts are Renewed to Obtain Co-operation in North Texas	Dec. 5	78

WEST TEXAS

Glasscock County

Howard-Glasscock Leases on Part Payment Plan	July 25	56
Howard-Glasscock Production Prorated Downward	June 6	56
Reduced Pipe Line Takings Cut Howard-Glasscock Output	Aug. 1	223
Shallow Production in Howard-Glasscock Area to be Prorated	Sept. 5	61

Judkins

Judkins Area Threatens Big Flush with no Control in Sight	Feb. 21	57
Judkins Field Will Have Four Pipe Lines	Feb. 28	40
Judkins Wells Pinched Pending Completion of Pipe Lines	Feb. 28	53
Judkins Production Reduction Lifted with Line Completions	March 7	64
Judkins Field to be Active; No Curtailment in Prospect	March 14	234
Judkins Field Extended Mile South	March 21	66
Judkins Production Increasing with Four Lines Waiting	April 4	55
Judkins Lease Deal Means Orderly Development	April 11	55
Judkins Lack of Outlet May Force Proration of Output	May 2	88
Judkins Field Proration Order Passed to Commission	June 27	57
Judkins Production Cut 5000 Barrels August 1	July 25	67
Judkins Output Limited to 10,000 Barrels by Lack of Market	Aug. 1	213
Judkins Field Production Boosted by 1750 Barrels Daily	Sept. 5	85

Yates

Yates Prorated Output Reduced Another 10,000 Barrels.	July 4	63
Further Curtailment of Yates Output Agreed	Dec. 5	79

Wildcats and Miscellaneous

Ector County Area Promises Much Activity for New Year	Jan. 3	55
Wheat Field, Loving County, Extended Mile East	Jan. 17	53
Good Producer Enhances Ector County Prospects	Jan. 24	54
West Texas Wildcat Discoveries Mark Possible Important Field	Jan. 31	130
Taylor-Link Field Extended Two Directions by Flowing Wells	Jan. 31	194
Three Big Lake Deep Tests Making Progress	Jan. 31	195
Hendrick Field Has Big Lead in Total Recovery in West Texas	Jan. 31	196
Ector County Becomes Next Big Potential West Texas Field	Feb. 7	54
Ector County Gets Another Well and Ten More Locations	Feb. 14	67
Another West Texas Well Makes Depth Record	Feb. 21	52
Test for Gas in Stephens County Yields Oil	Feb. 28	66
Ector County Assuming Place as Important Drilling Center	Apr. 18	55
Western Crane County Wildcat Shows Favorably	Apr. 25	53
Andrews County Test Nearing Production Level	May 16	67
Crane County Wildcat Looks Good for Production	May 23	51
New Well Producing Oil and Gas From Big Lake Deep Sand	May 30	49
West Texas Buyers Restrict Runs 50 Per Cent in Some Fields	June 6	55
Andrews County Wildcat Shows Prospects of Production	July 4	61
West Texas Field Work Hits Big Slump	July 11	69
Deep Production at Big Lake Give Substantial Boost	July 18	63
Field Development is Orderly in West Texas During Last Year *By H. H. King*	Aug. 1	138
West Texas Discovery Well Table	Aug. 1	139
West Texas Has 303 Dry Holes During Past Year *By H. H. King*	Aug. 1	142
West Texas Dry Hole Record for Past 12 Months *By H. H. King*	Aug. 1	145
Andrews County Gas Flow May Mark New West Texas Field	Aug. 8	63
Gasser Opens New Field for Andrews County	Aug. 15	58
New Depth Record for Production in Big Lake Field	Aug. 22	70
Ector-Andrews County Area Has Two Prospects for New Fields	Sept. 5	60
North Ector County Producer Opens New Area	Sept. 12	89
Ector County Wildcat May Open New West Texas Pool.	Sept. 19	79
Gulf Well in Ward County Promises Best Production in Area	Sept. 26	70
World's Second Deepest Oil Well Completed at Big Lake.	Oct. 10	179
Crane County Producer Ushers in West Texas Field	Oct. 10	179
Ward County Semi-Wildcat Well Is Good Producer	Oct. 17	67
West Texas Area Restored to Favor by Crane Strike	Oct. 17	68
Western Crane County Wildcat to Be Deepened	Oct. 24	70
Big Lake Wells Increase Flow Against Back Pressure	Oct. 31	60
Andrews Wildcat's Prospects Dampened by Sulphur Water	Nov. 7	111
Four New Wells in Gulf-O'Brien Area Widely Separated	Nov. 21	77
Gas Yield Reduced in Big Lake Deep Wells	Nov. 28	77
Four Flowing Wells Completed in Burkett Pool	Nov. 28	78
Andrews County Wildcat Increases Flow Following Shots	Nov. 28	78
Two Big Lake Deep Wells Have Been Tubed	Dec. 5	79

EAST CENTRAL TEXAS

Van Field

Van Operating Committee Starts Additional Tests	Jan. 10	50
Wildcat Work in Van Area Continues to Increase	Jan. 17	54
Van Test Finds Formations Lower Than Original Wells.	Jan. 24	55
Van Field Important Development in Texas During Year. *By H. H. King*	Jan. 31	127
Locations by "Outsiders" Not to Disrupt Van Plan	Jan. 31	196
Van Extension Indicates Area of Important Proportions.	Feb. 7	56
Successful Completions at Van Require More Offsets	Feb. 14	68
Van Production to West Found Deeper; More Wells Start	Feb. 21	59
Two More Producers Send Production to New Peak	Feb. 28	54
Lease Requirements Keeping Van Drilling Active	Mar. 21	67
Van Success Encourages East Central Texas Campaign.	Mar. 28	58
Van Completions Extending Area Showing Favorably	Apr. 4	55
Favorable Progress Made of Van Field Outlet	May 2	91
Unit Operated Van Field Has 20 Rigs and More Coming.	May 9	54
Van Field Extended 2000 Feet to Northeast	May 16	68
Congestion Forces Cut of Van Production	May 30	50
Production of 500 Barrels Per Well Allowed at Van	June 6	57
Plan Second Unitized Area for Development East of Van.	June 13	36
Van Production Extended Beyond Unitized Area	June 20	60
Van Extension Beyond Unitized Area Still in Doubt	June 27	58
Van Extension Precipitates Move for Second Unit Agreement	July 4	62
Van Field Drilling Program Halted by Water Shortage.	July 25	66
Drilling at Van Completed After Complete Shut-Down.	Aug. 1	216
Second Flowing Well Outside Van Unitized Area	Aug. 8	63
Third Producer Outside Van's Unitized Area Completed.	Aug. 29	75
Four Companies Organizing Forces to Drill Outside Van Unitized Area	Sept. 5	85
Complete 12,000 Barrel East of Van Unitized Area	Sept. 19	80
Van Field Advisory Committee Named by Commission.	Sept. 26	70
Van Production Area Extended North, South and West.	Oct. 3	186
Van Has 750,000 Barrels Daily Potential on First Anniversary	Oct. 10	163
Van's Activity Promises Increase in Production Allowance	Nov. 28	70
Seven New Van Locations Ordered Drilled	Dec. 5	80
Seven New Locations Ordered for Van Field	Dec. 26	58

Wildcats and Miscellaneous

Mexia-Corsicana Area Has Low Rate of Decline in 1929. *By H. H. King*	Jan. 31	135
Wildcat Work in East Texas Becoming More Active	Apr. 11	50
LaRue Structure Promises Oil Strike in Henderson County	Apr. 25	54
Wildcat Drilling Block in Shelby County	July 4	67
Rusk County Wildcat Presages New Field in East Texas.	Sept. 12	87
Wildcat Well Establishes Production in Rusk County	Oct. 10	190
Rusk County Wildcat Well's Output Shows Good Increase	Oct. 17	67
Push Exploration of Drilling Blocks in Rusk County	Oct. 24	70
Tests Drilling Near Joiner Well Reach Interesting Depths	Nov. 7	115
Joiner Future Depends on Pending Completions	Nov. 14	77
Joiner Area Records Two Failures During Week	Nov. 21	78
Wildcat Activity in Eastern Texas Counties on Increase.	Nov. 21	80
Three East Texas Wildcats Are Closely Watched	Nov. 28	78
Oil Show in Two Tests Revives Interest in Joiner Area.	Dec. 5	80
Henderson County Test Revives Interest in That Area	Dec. 12	78
Test of Polk County Well Shows Favorably	Dec. 12	76
Joiner Area to Be Scene of Intensive Development	Dec. 19	75
Second Oil Area in Rusk County Appears Likely	Dec. 26	58
Shelby County Test Is Abandoned	Dec. 26	58

SOUTH TEXAS

Darst Creek

Drilling Delays Lower Darst Potential on First Gauge	Jan. 3	6
Darst Drilling Active With No Added Line Outlet	Jan. 10	6
Darst Creek Potential Gauge Shows 30,988 Barrels	Jan. 17	5
Darst Potential Up 50 Per Cent on February 1 Gauge.	Feb. 7	6
Darst Creek Potential Up 50 Per Cent	Feb. 21	6

	Date	Page
Darst Creek Production Above Prorated Allowance	Feb. 28	56
Darst Creek Potential Increased to 113,000 Barrels	Mar. 7	69
New Darst Well Could Produce Three Times Field's Prorated Allowance	Apr. 4	63
Prolific Darst Creek Well Starts Five Offsets Drilling Fast	Apr. 11	59
Production Sale Not to Affect Darst Creek Proration	Apr. 18	60
Complete Two Offsets to Darst Record Producer	Apr. 25	58
Expect Increase in Darst Creek Field Allowance	May 2	94
Complete Two Prolific Wells in Fault at Darst Creek	May 23	56
New Field in Prospect for Guadalupe County	May 30	56
Darst Creek Potential Lower After Re-Gauging of Wells	June 6	59
Prolific Well at Salt Flat; Guadalupe Wildcat Planned	June 13	61
Darst Potential Is Down Despite New Completions	June 20	63
Darst Well Average 200 Barrels Daily During May	June 27	60
Darst Creek Limitation Under State Supervision	July 18	67
Darst Creek Schedule Remains Unchanged Until August 1	July 25	68
Darst Creek Inverts U. S. Production Trend	Aug. 8	47
Eleven Inside Tests to Start in Darst Creek Field	Sept. 5	63
Darst Creek Active With 25 Operations Underway	Sept. 9	83
Eight New Inside Wells Completed at Darst Creek	Sept. 26	72
Rush Darst Completions Before Announcement of New Schedule	Oct. 3	189
New Wells Boost Darst Creek Production 2000 Barrels	Nov. 7	118
Darst Creek Production Again Within 30,000 Barrel Limit	Nov. 21	85
Darst Production Still Above Daily Allowable	Nov. 28	82
Darst Creek Field Down 5574 Barrels Daily	Dec. 5	83
Water Encroachment Increases to 60 Per Cent at Darst Creek	Dec. 19	82

Pettus

New Field Opened in Bee County; Find Follows Gas Development	Feb. 7	57
Second Oil Producer at Pettus Starts More Tests Drilling	Mar. 14	233
Bee County Wildcat Has Showing Two Miles from Pettus	Apr. 18	61
Pettus Extension Well Makes Wet Gas	Apr. 25	64
Complete Third Producer in Pettus Field	May 2	94
Three Completions Raise Pettus Production to 2500 Barrels	May 9	59
Bee County Wildcat Showing May Mean Pettus Extension	May 16	73
Pettus Production Area Extended Three Miles West	May 30	53
Wildcat Opens New Producing Spot in Bee County	June 6	61
Two Pettus Wildcats Abandoned as Failures	June 13	60
Pettus Field Extended Mile West; Town Lot Drilling Looms	June 20	63
Wildcat Shows Promise Pettus Wide Producing Area	June 27	59
Pettus Townsite Drilling Starts; 25 Rigs Active in Field	July 4	65
Pettus Producing 3889 Barrels from Nine Wells	July 11	76
Pettus Operators Agree to Hold Production in Check	July 18	68
Two new Producers Completed at Pettus; Two Near Completion	July 25	70
Cosden's McKinney 2 Sets Record for Pettus	Aug. 1	218
Pettus Is Center of Play Along Gulf Coast *By Jack Logan*	Aug. 8	26
Pettus Leads Gulf Coast Fields With Five Completions	Aug. 29	77
Pettus Field's Daily Production Averages 8250 Barrels	Sept. 19	83
Two Producers Completed in Pettus Townsite Area	Oct. 17	71
Pettus Production to Remain at 4500 Barrels	Oct. 31	63
Pettus' Potential on Official Gauge Shows 11,408 Barrels	Nov. 7	118
Potential Production at Pettus Shows Decline	Dec. 12	75
Ray-McKinney District Extended Three Miles North	Dec. 19	84
Pettus Field Extended Northeast Three Miles	Dec. 26	61

Refugio

Refugio Oil Production Increasing Steadily	Jan. 10	63
New Pipe Line Outlet Increases Movement of Refugio Crude	Jan. 31	200
Refugio Given Extension; Production Increases Continue	Feb. 14	71
Refugio Production Still Climbs; Line Outlet Increased	Feb. 21	60
Refugio Area Extended Two Miles to Northeast	Feb. 28	57
Deep Well Extension of Refugio Field Increases Flow	Mar. 7	67
Refugio Passes 40,000 Barrels Daily; Still Climbing	Mar. 21	68
Nine New Producers Increase Refugio Production	Mar. 28	61
Refugio Crude Given Price Raise With Gravity Schedule	Apr. 4	60
Chief Interest at Refugio in Tests Over Mile in Depth	Apr. 11	58
Refugio Production Shows Decline from Recent Peak	Apr. 18	59
Two Wells Increase Refugio Deep Producers to Even Dozen	Apr. 25	58
Refugio Represents New Type Oil Field for South Texas	May 2	49
Many Completions and Deep Tests Mark Refugio Activity	May 9	59
Refugio Deep Sand Apparently Extends Westward	May 16	72
Deep Drilling Is Assuming Large Proportions at Refugio	May 23	55
Interest at Refugio Still Centers Around Deep Tests	June 13	59
Two 5500-Foot Wells at Refugio	June 20	64
Wild Well Halts Refugio Business and All Adjacent Drilling	July 4	67
Failures Dampen Ardor for Deep Drilling at Refugio	July 11	77
Decline of Production at Refugio Continues, New Wells Added	July 18	65
Wild Gas Well in Refugio Field Still Uncontrolled	Aug. 1	219
Wild Refugio Gasser Quiets Down After Cratering	Aug. 8	68
Five Completions Add 1000 Barrels to Refugio Output	Sept. 19	82
Refugio Threatened by High Pressure Gas Well	Oct. 31	62
Complete Three Wells in Deep Sand at Refugio	Nov. 28	83
Refugio Field Is Extended One-Half Mile East	Dec. 5	83
Refugio Adds 350-Barrel Well During Week	Dec. 26	56

Wildcats and Miscellaneous

Chapman Field Development Slowed Down by Lack of Outlet	Jan. 13	28
Serpentine Production from New Area in Williamson County	Jan. 24	59
Chapman Market Outlet Ready About June 5	June 6	57
Chapman Field Market Outlet Provided	July 4	74
Live Oak County Wildcat Promises Production	July 18	70
Mirando Section of Southwest Texas Attracts Attention	Aug. 1	219
Chapman Completions Raise Daily Output to New High Level	Aug. 1	232
Dozen Important Tests Underway in Laredo District	Aug. 8	70
Second Gasser Completed in Western Nueces County	Aug. 15	60
Oil Production in Saxet Field Adds New South Texas Area	Aug. 22	73
Three New Locations in Saxet Area, Nueces County	Sept. 12	91
New Producing Area for Duval County Promised	Sept. 19	83
Fourth Oil Producing Pool Is Opened in Bexar County	Oct. 24	74
Live Oak County Completion Delayed by Heavy Pressure	Oct. 31	63
Activity Resumed at Chapman as Water Shortage Ends	Oct. 31	65
White Point Field May Become Oil Producing Area	Nov. 21	85
Salt Flat Allowable Fixed at 15,333 Barrels Daily	Nov. 21	86
Matagorda County Well to Be Drilled Deeper	Nov. 28	82
Duval County Wildcat Still Flowing 195 Barrels Daily	Nov. 28	83
Kerr County Promises New Production for South Texas	Dec. 5	84
First Well for Jim Wells County Completed	Dec. 5	84
Government Wells Area Extended 1½ Miles South	Dec. 5	84
White Point Discovery Well Flowing 124 Barrels Daily	Dec. 5	84
Deepen Duval County Well After Testing Salt Water	Dec. 12	76
Travis County Well Reported Producing from Serpentine Formation	Dec. 19	63
New Kerr County Area Active Following Successful Tests	Dec. 19	76
Oil Production Established in Agua Dulce Field	Dec. 19	88
Gas, Spray of Oil, Opens New Area in Southwest Texas	Dec. 26	61
Kerr County Well Attracts Wide Interest	Dec. 26	62

TEXAS GULF COAST

(See also Louisiana Gulf Coast)

Barbers Hill

Deepest Producer at Barbers Hill Brings Largest Flow	Jan. 10	59
New Deep Producer at Barbers Hill Increases Flow	Jan. 17	58
Barbers Hill Deep Test Still Holding Up Production	Jan. 24	58
Barbers Hill Deep Well Holding Up Production	Jan. 31	199
Barbers Hill Deep Producer Holds Initial Production 30 Days	Feb. 7	55
Barbers Hill Deep Producer Declines Slightly	Feb. 14	71
Barbers Hill Deep Well Still Flowing 5000 Barrels	Feb. 28	58
Barbers Hill Deep Sand Well Still Holding Up	Mar. 7	68
Deep Sand Development at Barbers Hill *By P. S. Murphy and Sidney A. Judson*	Apr. 4	25
Barbers Hill Test Nearing Level of Deep Production	Apr. 4	56
Barbers Hill Deep Area Extended West	Apr. 25	60
Barbers Hill Wildcat Test Drilling at 6590 Feet	May 2	92
New Depth Record Made at Barbers Hill	May 23	54
Wells Point to Deep Production on All Sides of Barbers Hill *By Jack Logan*	May 30	25
Barbers Hill Interest Centers on West Side Deep Test	June 6	58
Well Flows Over 600,000 Barrels in Five Months at Barbers Hill	June 13	60
Barbers Hill Most Active South Texas Area; Deep Test Due	June 27	61
Barbers Hill Well Jumps from 300 to 6000 Barrels Daily	July 25	68
New Wells at Barbers Hill Have Large Initial Flow	Aug. 1	218
West Flank at Barbers Hill Proved for Oil Production	Aug. 29	77
Barbers Hill Well Penetrates Cap Rock and Salt to Pay Sand	Oct. 10	182
Complete Another Sub-Salt Dome Well at Barbers Hill	Oct. 31	62
Another Barbers Hill Well Completed Through Salt	Dec. 5	83
Barbers Hill Well Makes Record Depth Through Salt	Dec. 19	84
New Deep Sand Opened at Barbers Hill	Dec. 26	63

Humble

Deep Sand Development Opens New Possibilities for Humble Field *By Jack Logan*	Jan. 17	27
Humble Townsite Well Makes 1500 Barrels from Deep Sand	Jan. 31	199
Humble Deep Producer on West Side Increases Production	Feb. 7	58
Humble Deep Tests Prove Disappointing	May 2	92
Two Producers and One Failure for Humble	July 25	69

	Date	Page
Wildcats and Miscellaneous		
State Offering Submerged Nueces Bay Leases	July 4	66
Deepest Producing Well of Gulf Coast	Jan. 10	61
Humble Gets First Commercial Well on Moss Bluff Dome	Jan. 10	61
Production Below 5000 Feet in 17 Gulf Coast Fields — *By Richard A. Jones*	Jan. 24	27
Deep Drilling Around Old Domes Boosts Gulf Coast Recovery — *By Jack Logan*	Jan. 31	141
Brooks County Discovery Well Flows 200 Barrels Oil With Gas	Feb. 7	57
Gulf Coast Records 44 Completions Past Week	May 9	60
Prolific Producer Completed at North Dayton	May 30	56
Esperson Dome Test Promises Production at New Depth	June 6	58
Test on South Flank at North Dayton Is Failure	June 13	59
North Dayton Well Still Producing 2400 Barrels	June 20	63
Esperson Dome Deep Test to Drill Plug	June 20	64
North Dayton Deep Well Flowing 2000 Barrels	July 4	66
Second Oil Producer at Moss Bluff	July 11	77
Nueces County Wildcat Gasser Runs Wild	July 11	77
Esperson Dome Deep Test Fails to Flow; Will Deepen	July 18	66
Older Fields in Texas Coast Area Have Active Week	Aug. 8	68
Raccoon Bend Field Extended Across Brazos Into Waller County	Aug. 15	60
Esperson Dome Gasser Sets New Gulf Coast Depth Record	Sept. 5	62
Drilling in Progress on Three Sides of Moss Bluff Dome	Sept. 19	84
North Dayton Gets Good Producer from Workover	Sept. 26	72
Stratton Ridge Dome Test Penetrates Cap Rock Into Salt	Sept. 26	73
First Important Oil Strike Made at Mykawa, Harris County	Oct. 10	189
Texas Gulf Coast Completions Register Decline During Week	Oct. 31	63
Matagorda County Has Two Interesting Developments	Dec. 12	75
Bloomington Test in Victoria County Is Abandoned	Dec. 12	76
Moss Bluff Extended 2500 Feet Northward	Dec. 19	82
Washington		
Several Tests for Oil in Washington	July 25	76
Wyoming		
Ohio Oil Company Opens New Field Near Cody	Mar. 21	74
Osage Deep Development to Be Active During Summer	Mar. 28	67
Osage Extension Well Comes in for 200 Barrels	June 6	90
Prove Tensleep Sand at Little Lost Soldier Field	June 20	66
Get Through Gas Sand in Sand Draw Test	June 20	92
Government Offering Lands in Park County, Wyoming	July 4	66
Oregon Basin Leases to Be Sold	July 18	80
Two Wyoming Deep Tests Hold Interest	Aug. 1	280
Oil Show in Second Wall Creek Sand at Midway Dome	Aug. 8	74
Midway Dome Test Believed Opening Important Wyoming Light Oil Area	Sept. 5	82
Plan Production Test at Midway Dome	Sept. 5	82
Interesting Tests Are Planned in Wyoming	Sept. 12	97
Discover Shallow Pool in Southwestern Wyoming	Sept. 12	98
Complete Large Well in Sundance Sand at Lance Creek Field	Oct. 24	82
New Field Proven in Park County, Wyoming	Dec. 5	82
Salt Creek Well Has Tested All Formations	Dec. 5	82
Seek to Sidetrack in Park County, Wyoming, Test	Dec. 12	72

Maps

	Date	Page
FOREIGN		
World Map of Leigh Itinerary	Jan. 31	67
Iraq Field	Jan. 31	179
Caribbean Region	Feb. 21	67
North German Plain	May 23	24
Showing Search for Oil in Western Canada	July 4	40
Northern Mexico (Special Insert)	Dec. 5	
Northern Mexico—State of Coahuila	Dec. 12	33
DOMESTIC		
Lea Pool, New Mexico	Jan. 3	58
Muskegon Field, Michigan	Jan. 10	27
Oklahoma City Pool, Oklahoma	Jan. 10	51
Barbers Hill Dome, Chambers County, Texas	Jan. 10	60
Humble Field, Harris County, Texas, Ownership (Special Insert)	Jan. 17	
McPherson, Harvey and Sedgwick Counties, Kansas	Jan. 31	80
California—Principal Proven Fields Developed During 1929	Jan. 31	120
California—Lost Hills and South Dome of Kettleman Hills	Feb. 14	75
Florida	Feb. 21	34
Earlsboro Field, Oklahoma	Feb. 21	56
Judkins Field, Texas	Feb. 21	57
Woods County, Oklahoma	Feb. 28	37
Woodward County, Oklahoma	Feb. 28	37
Western Public Service Corporation—Natural Gas System	Mar. 14	82
Refugio Field, South Texas (Special Insert)	May 2	
Darst Creek, Gundalupe County, Texas	May 23	70
Barbers Hill Dome, Chambers County, Texas	May 30	27
Hobbs Field, New Mexico	June 6	27
Western Kansas	June 13	25
Chapman Field, Williamson County, Texas	June 13	29
Oklahoma City Field, Oklahoma (Special Supplement)	Aug. 1	
Wanette Pool, Oklahoma	Sept. 5	44
Hugoton Gas Area, Kansas, With Reference to Amarillo District	Sept. 26	30
Gulf Coast Salt Domes (Special Insert)	Oct. 3	
Elk Hills Naval Petroleum Reserve	Nov. 21	9
United Gas System's Line, Kirbyville, Texas, to Franklin, Louisiana	Dec. 12	63
Haynesville, Louisiana, Area, Showing Repressuring Project	Dec. 19	2
Jackson, Mississippi, Gas Area	Dec. 26	3
Kerr County, Texas, With Reference to Other Producing Fields	Dec. 26	62

Pipe Lines and Transportation

CONSTRUCTION NEWS

(See Also Engineering Classification for Other Date)

	Date	Page
GENERAL		
The Year in Traffic and Transportation	Mar. 14	67
Community Life at a Pipe Line Station — *By George Reid*	Aug. 8	30
Five Major Pipe Line Projects Under Way in Mid-Continent	June 13	64
FOREIGN		
Iraq Directors to Select Pipe Line Route	Jan. 31	179
First Arc Welded Pipe Line in Mexico	Feb. 28	84
In South American Fields Transportation is Largely a Matter of Rolling Your Own	Mar. 14	99
Pipe Line to Be Built From Vera Cruze to Mexico City	June 27	74
Pipe Lining in the Tropics	July 4	38
To Build Las Palmas Pipe Line	Oct. 7	41
Mexican Eagle's Pipe Line	Oct. 31	39
DOMESTIC		
Gas Lines		
Natural Gas Line Work in North Texas During 1929	Jan. 31	216
Cities Service to Take Oklahoma City Gas	Feb. 14	67
Long Line Across Texas Modern in Construction	Mar. 14	64
Extensive Gas Line Construction in Rocky Mountain Area	Mar. 14	84
Missouri-Kansas Holdings and Service in Kentucky Extended	Apr. 4	68
Pacific Coast Communities Have Natural Gas	Apr. 11	94
Survey for Line From Panhandle to Omaha	Apr. 25	68
New 950 Mile Gas Tank Line Proposed	Apr. 25	68
Start Work on 300 Mile Gas Line in New Mexico	May 2	98
Three Lines From Panhandle to Mid-West Getting Underway	May 9	38
Cities Service Line to Sedalia, Missouri	May 9	68
Gas Pipe Line Authorized	May 9	68
Plans for Three Natural Gas Lines to Midwest Go Forward	May 23	68
Additional Gas Lines Under Construction	May 30	68
Two Lines to Expand Houston Natural Gas System	June 13	68
Line Will Take Louisiana Gas to Mississippi and Alabama	June 27	68
Missouri-Kansas Rushing Work on Long Line	June 27	68
Work Progressing on Gas Supply for New Mexico	June 27	74
First Contracts for 1000 Mile Gas Pipe Line Are Let	July 25	38
Cities Service Constructing New Gas Line to Extend Service	July 25	38
Plan Gas Line from Boggy Creek to Huntsville	Sept. 5	68
Plan Gas Pipe Line from Cut Bank Field to Seattle	Sept. 12	68

	Date	Page
Two Gas Lines Planned as Market Outlets for Big Lake Field	Nov. 7	96
Purchase of Southern Natural Gas Line is Rumored	Nov. 28	86
Plan Gas Line from Kirbyville, Texas, to Franklin, Louisiana	Dec. 12	63
Missouri-Kansas May Tap Midwest Markets With Line	Dec. 19	87
Gasoline Lines		
Magnolia Building Line to Move Gasoline	Mar. 21	66
Magnolia Tests Gasoline Line	July 25	56
North Texas Refiners Lay Plans for Gasoline Line to Gulf Coast	Nov. 7	94
Oil Lines		
Texas-Empire Line to Chicago Another Welding Achievement	Jan. 3	28
Shell Purchase of Taylor-Link Pipe Line Offers Relief	Jan. 10	55
Pipe Line Construction in California During 1929	Jan. 31	63
Review of Pipe Line Construction in Central Texas. *By H. H. King*	Jan. 31	128
Pipe Lines Constructed in Gulf Coast and South Texas During 1929	Jan. 31	216
Refugio Field Given More Line Outlet	Feb. 7	42
Line to Judkins	Feb. 21	52
Start Construction of Pipe Line from Van Field to Coast	Mar. 7	59
Texas-Empire Line Capacity Increased by Nine New Stations	Mar. 7	19
California Line Builders Were Busy Last Year. *By Brad Mills*	Mar. 14	75
Important Texas Line Projects Completed in Recent Months	Mar. 14	77
Pure Starts Line to Serve Van Field	Mar. 14	78
Empire Rumored Planning Line to Channel Site	Mar. 14	78
Humble Starts Construction on Line to Refugio	Mar. 14	79
Oil Pipe Line Construction at Low Ebb in Louisiana-Arkansas	Mar. 14	80
Little New Pipe Line Work in Oklahoma-Kansas. *By Warren Baker*	Mar. 14	87
Mud is South Texas' Impediment to Line Construction	Mar. 14	235
Two Pipe Lines Serving New Borger Field	Mar. 14	252
Gulf Building Line to Serve Hankamer	Mar. 28	62
Humble Enters Humble Field with Four-Inch Pipe Line	Apr. 4	62
New Hearing Announced on Proposed Line to Yates Field	Apr. 4	88
Williamson County Field Gets Two Pipe Lines	May 9	44
Plan Maverick Pipe Line	May 16	95
Gulf Building Additional Line Outlet for Darst Creek	May 30	52
Speculation on Ajax Connections by Mid-Continent Observers	May 30	60
Standard Man Heads Ajax Line	June 13	65
Shell Rushing Work on Line to Serve Hobbs Area	June 20	61
Gulf Line, Oklahoma East, Will Serve New Refineries	June 20	25
Map of Sinclair and Prairie Lines from Texas to Great Lakes	July 25	33
Magnolia May Extend West Texas Line	July 25	51
Start Work on Union Gulf Line to Eastern Points	July 25	51
Plan Two Refineries and Pipe Line Relief from Chapman Field	July 25	69
Pipe Line Construction in 1930, Actual and Proposed	Aug. 1	195
Work Starts on Ajax Pipe Line at Five Separate Points	Aug. 1	226
Magnolia Extends Pipe Line System in Oklahoma to Handle Burbank Oil	Aug. 22	74
Texas Pipe Line Company Rushing Work on 20 Mile Parallel Line	Aug. 15	50
Pettus and Refugio Outlet Lines Construction to Start Soon	Aug. 15	59
Atlantic Pipe Line to Build Crude Extension	Sept. 12	89
Humble Announces Pipe Line Connection for Pettus Field	Sept. 12	90
New Line from Yates Field to Glenn Pool, Oklahoma, Likely	Sept. 26	69
Texas Pipe Line Surrenders East Central Texas Crude Connections	Oct. 3	164
Humble Line from Pettus to Coast Starts Operating	Oct. 10	182
Magnolia to Complete Duval County Line October 20	Oct. 24	74
Line Facilities Now Available to New Castle-Orth District	Nov. 21	79
Movement Through Ajax Line to Start Early in December	Nov. 28	62
Second-10-Inch Line Outlet for Van Field Completed	Dec. 19	75
Ajax Line Now Moving Crude from Mid-Continent	Dec. 26	54

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